AN INVESTIGATION INTO ~~THE STRATEGIES OF~~ FIRMS' STRATEGIES AND THEIR FINANCIAL PERFORMANCE IN THE UK CONSTRUCTION INDUSTRY ~~FROM 1986 TO 1994~~

BY

MISWAN ABDUL HAKIM MOHAMMED

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ABSTRACT

This study has two main objectives. The first objective is to identify the relationship between the construction firms' competitive strategies and their financial performance. The second objective is to observe the behaviour of the construction firms' strategies in three different economic periods, i.e., boom (1986-89), recession (1990-93) and recovery (1994-onward). In order to achieve these objectives, the study was divided into two main phases.

Firstly, the relationship between firms' competitive strategies and their financial performance was investigated. Four strategic variables were chosen to represent competitive strategies: type of activity; extent of diversification; extent of internationalisation; and level of gearing. Firms' financial performance was represented by five variables: return on capital employed; return on shareholders' funds; current ratio; quick ratio; and turnover. Secondly, the behaviour of the construction firms' strategies in the three different economic periods was investigated. The following main variables were chosen to represent the firms' strategies: direction; method; generic; diversification; internationalisation; functional; resources; financial performance measurements; and financial performance determinants.

The findings of the first phase indicated that, there were significant relationships between firms' competitive strategies and their financial performance. Type of activity had relationships with firms' profitability and liquidity. Profitability was also influenced by the level of gearing. However, extent of diversification and extent of internationalisation had strong relationships with turnover. In the second phase, it was found that the construction firms considered that expansion by way of internal expansion and joint-venturing as their most important developmental strategies. Housing was regarded as the most important strategy for diversification purposes. Europe was considered as their most important market outside the UK. R&D and advanced technology were not considered as the important functional strategies. Management, skilled workers and cash capital were their three most critical resources. Cash flow was regarded as the most important financial performance indicator whilst market condition was perceived as the most important financial performance determinant.

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
BOP	Balance of Payment
CIMA	Chartered Institute of Management Accounting
CSV	Competitive Strategy Variables
FPV	Financial Performance Variables
GDP	Gross Domestic Product
PLC	Public Limited Company
ROCE	Return On Captial Employed
ROSF	Return On Shareholders' Funds
R&D	Research and Development
SPSS	Statistical Package for Social Sciences

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CHAPTER 1

1.1 Introduction

One of the most positive features of recent management writing is the emphasis placed on strategy and direction. If firms know where they are going, they are more likely to get there. Understanding the nature of strategy and the distinction between strategic, tactical and other decisions is the first step in establishing a sense of direction and vision in a firm.

Ohmae (1982) stated that successful business strategy results not from rigorous analysis but from a particular state of mind. In what he calls the mind of the strategist, insight and a consequent drive for achievement, often mounting to a sense of mission, fuel a thought process that is basically creative and intuitive rather than rational. However, he noted that strategists do not reject analysis. Indeed they can hardly do without it. Great strategies, like great works of art or great scientific discoveries, call for technical mastery in the working out but originate in insights that are beyond the reach of conscious analysis.

In his discussion of strategic planning Kay (1993) stated that attempts to forecast the evolution of a firm for more than a short period ahead are fundamentally useless. He continued that like the weather, business is a chaotic system in which small differences in the starting-point can translate into large divergencies in final outcomes. He believed that we can never hope to know what the weather will be ten years from today, and we will never be able to forecast what profits will be in ten years' time either.

A construction firm is not an exception to the above perspectives. By understanding the nature of strategy therefore, this study would be a blend between

the analysis and the insights. The analysis of the relationship between realised strategy and financial performance would be carried out and then followed by the survey which captured the industry's perceptions, insights and predictions. The final conclusion of the study would not suggest any best strategy for a construction firm to follow but it would lay down a number of principles as a guide to formulating an appropriate strategy.

1.2 Problem Statements

The UK construction firms had experienced unprecedented growth during the strong and boom economic period from 1981 to 1989. It was during this period that most of the major construction firms had expanded their scope of activities and geographical coverage either nationally or internationally. The volume of turnover and the level of profit of these firms rose steadily each year to the peak performance which probably had never been achieved before this period. However, the sweet success ended abruptly by the rapid economic down-turn which began to afflict the construction industry by the end of 1989. Private housing became the first sector which was severely hit by the effect of the economic recession. The recession had continued, deepened and prolonged to 1993 and imparted devastating effects upon the construction industry. The word recession was then changed to "depression" to show the magnitude of the severity of this harsh economic climate. During the depression, many firms incurred heavy losses which eventually sent some of these firms into liquidation. However, there were some firms which were more resilient and subsequently were able to reduce the effect of the recession upon their financial performance. It seemed that they were more prepared with better financial positions to face the deep and prolonged recession.

It was clear that the economic environment had played the most important role in determining the financial success or failure of a construction firm. However, there

was room for a construction firm to maneuver in order to be more impervious to the effects of the turbulent economic climate. The ability of a firm to decide on the competitive strategic issues such as the scope of business, the geographical coverage and the resource deployment would increase its competitiveness (Ansoff 1987). However, these strategic decisions were related to the broader aspect of the firms' strategies which include development and functional strategy.

The firms' strategies are evolving throughout the different economic environment and will affect the firms' financial performance in the long run. A firm has the option in choosing the type of activity which matches its capability. It can then diversify into other types of activity or remain with the existing business activity. It can concentrate within the UK market or go outside the UK either to Europe or to other continents. Whatever decisions taken, they can not be easily changed when the economic environment changes. For instance, a firm which has already diversified does not find it easy to dispose any of its activity in order to re-focus on its original business. It will effect the employees, the structure of the company and can be very costly. Therefore, a construction firm has to be careful in choosing the appropriate strategies so that it is flexible and can be adjusted according to the market conditions when necessary.

The above problem statements lead to the following research questions:

(a) What were the relationships between the firms' competitive strategies and their financial performances?

(b) What were the appropriate firms' strategies in the different economic environments?

1.3 Hypotheses

In order to respond to the above questions, the hypotheses can be developed in two phases. The first phase concerns the relationships between firms' competitive strategies and their financial performances. In the second phase, the hypotheses of the appropriate construction firms' strategies in the different economic environments can be developed.

1.3.1 Relationships Between Firms' Competitive Strategies and Their Financial Performance

There is much evidence which supports the theory that firms' competitive strategies affect their financial performance (Rue and Holland 1989; Ansoff and Sullivan 1993; Porter 1979; Cool 1985; McGee and Thomas 1986; Fiegenbaum 1987; Fiegenbaum and Thomas 1990; and Lewis and Thomas 1990). According to Ansoff (1987) a firm's strategic variables are categorised into four broad components: scope; resource deployment; competitive advantage; and synergy. However, competitive advantage and synergy are not treated as strategy since they represent the resultant of scope and resource deployment decisions taken by the firm (Cool 1985; and Fiegenbaum 1987). Therefore, scope and resource deployment decisions of the construction firms will be considered in this study. The scope of the construction firms will be represented by: (a) type of activity; (b) extent of diversification; and (c) extent of internationalisation (Male and Stocks 1991; Newcombe, Langford and Fellows 1993; and Hillebrandt and Cannon 1990). The resource deployment will be represented by the level of gearing in this study due to its strong relations with various financial factors (Hutcheson 1993; and Hillebrandt and Cannon 1990).

The previous research on the construction industry's financial performance did not follow any standardised approach in terms of the measurements (Ramsay-Dawber 1993). However most of the studies stressed profitability, liquidity and turnover as measures of corporate success (Akintoye and Skitmore 1991; Hillebrandt and Cannon 1990; Fellows 1981; Ramsay-Dawber 1992; Vernon-Harcourt 1982; and Tafler 1981).

Type of activity

Many of the major construction companies are involved in contracting, house building, property development and other activities which are related to or not related to construction (Hillebrandt and Cannon 1990). According to Akintoye and Skitmore (1992) other construction-related activities and house building generated a much higher profitability than general contracting. However, these types of activities, house building and other construction related activities require heavy financing and they are regarded as cash-hungry businesses. On the other hand, contracting is considered as cash-generating type of business. This suggests the following hypothesis:

Hypothesis 1: Housing activity is likely to generate the highest level of profits but the lowest level of positive cash flow. On the other hand, it is contracting activity which is likely to generate the highest level of positive cash flow but a lower level of profit.

Extent of Diversification

As stated earlier, many of the major construction firms have diversified out of contracting into other types of construction activity, notably property development and housing. Many of them have also decided to diversify out of construction into other activities. The extent of diversification here refers to the number of different types of businesses which a company has decided to be in. Hillebrandt and Cannon

(1990) stated that expansion policy is often the main trigger for diversification even though many other reasons are given.

Extent of Internationalisation

Hillebrandt and Cannon (1990) observed that all the firms in their survey have operations overseas. Lampl (1989) stated that unless a company grows it will perish. He also stated that one of the means through which a company's growth can be achieved is geographical spread. Geographical spread strategy could be at the national level or international level. This suggests the following hypothesis:

Hypothesis 2: The extent of diversification and the extent of internationalisation are likely to be the main determinants of the size of a construction firm's turnover.

Level of gearing

According to Hutcheson (1993) the gearing ratios of the failed builders and developers tended to be higher than those of the survivor. He also argued that high gearing precludes a company escaping the pressure of recession because it has no capacity to borrow to survive. There is seldom, if any, uniquely profitable and reliable use for heavy borrowings. Hillebrandt and Cannon (1990) observed that the gearing is regarded as acceptable if net borrowing is below 40 per cent of shareholders funds, at 40-50 per cent there is concern and should it go over 50 per cent, considerable worry. This suggests the following hypothesis:

Hypothesis 3: A firm with a high level of gearing tends to be at risk of failure during an economic slump.

1.3.2 Appropriate Construction Firms' Strategies within The Three Different Economic Periods

Firms' strategies can be classified into three levels: corporate, business and functional. However, these three levels of strategies are not separated from each other and sometime are quite difficult to distinguished separately in the real practice. The hypotheses of the construction firms' strategies would be developed according to the following headings:

(a) Development strategy;

(b) Functional strategy;

(c) Resource strategy;

(d) Financial performance measurements; and

(e) Financial performance determinants.

Development strategy

According to Johnson and Scholes (1993) development strategy consists of generic strategies, directional strategies and method strategies. Generic strategies on which the construction firms could develop have three bases: price based, differentiation and focus. Since there is no standard product in the construction industry, the price competition takes place either at the project level or at the head office (as fixed and overhead costs). Differentiation is also difficult to be implemented under the traditional contracting procedure in which the contractor has no right to offer its own design. The third generic strategy is a focus which is related to either price based

strategy or differentiation strategy. However, it is a focus that is on the activity, rather than on the product which is more applicable for a construction firm. Focus on the core business activities has become one of the most important strategies among major construction firms in facing the recent economic recession (Odgers 1992; Sawdy 1991; and Pountain 1992).

According to Lansley (1989) firms will not stand still. Changes which they impose on their market, and changes within companies themselves provide little option but that of expansion. Lampl (1989) believed that unless the company expands it will perish. Two important means for a construction firm to grow are through diversification, either related or unrelated, and also through geographical spread, either nationally or internationally (Hillebrandt and Cannon 1990).

Method strategies explain how the firm's development strategy can be implemented. In their research, Hillebrandt and Cannon (1990) stated that all the construction firms contacted accepted that both methods, i.e. internal expansion and acquisition, had to be pursued although it seemed that in some cases, internal expansion was sought in a more planned and organised manner than was acquisition. The above observations suggest the following hypothesis:

Hypothesis 4: Except in recession, expansion is likely to be the most important direction strategy for the construction firms. Expansion is likely to be pursued by internal expansion and acquisition. The main generic strategy is likely to be "focus on core business".

Thus two important means for a construction firm to expand are through diversification and internationalisation. Hillebrandt and Cannon (1990) noted that all large contracting companies have diversified out of contracting into other types of construction activity, notably housing and property development. Biggam (1989)

stated that during the boom period of 1981 to 1989, house building throughout the UK and commercial developments and property, largely in the south east enjoyed unprecedented growth. He observed that profits were easily earned in these areas and many of the UK's largest construction groups, with almost indecent haste, moved rapidly away from civil engineering to the easier pickings of property and housing; to such an extent that many of the major construction groups are now regarded and rated as house builders and property developers. There were some other reasons which probably caused this change: government economic policy in privatisation; reduction in public spending; and encouragement of private sector growth and development.

According to Hillebrandt and Cannon (1990) Middle East was the biggest overseas market for the UK construction firms in 1982. For instance, Costain have said that 75% of their profit profits in 1980 came from the Middle East (Biggam 1989). However, this situation had changed because of the fall in oil revenues which had been used to finance construction projects. In 1987, America had emerged as the biggest overseas market for the UK construction firms (Hillebrandt and Cannon 1990). With the establishment of the European Single Market by the end of 1992 (Chapman and Grandjean 1991), Europe was predicted to be the biggest outside the UK market for the construction firms in future. This suggest the following hypothesis:

Hypothesis 5: Housing activity is likely to be the most important choice in the construction firms' diversification strategy. In terms of International geographical spread, Europe will be the biggest market for the construction firms outside the UK.

Functional Strategy

Hax and Majluf (1991) believe that the functional strategy has been probably the most neglected in America. They believe that this neglect has been one of the central sources of decline of global competitiveness in that country. In the construction industry, three main functional strategies that would be considered here were R&D, marketing and advanced technology. McLea (1991) revealed that a government-sponsored report has concluded that the British industry is inherently incapable of supporting an internationally competitive level of long-term research and development. In terms of marketing, Fellows (1993) noted that it is not strong feature of contractors. Hillebrandt and Cannon (1990) found that contractors introduced and expanded marketing activities during the late 1970s to help combat the effects of recession. They said that marketing is more developed among larger contractors. As far as advanced technology is concerned, Fumio and Shimizu (1988) argue that those who control the technologies control the market. Biggam (1989) stated that with some notable exceptions, the UK construction industry is not well equipped to meet the changes in the UK markets for the 90s. He also stated that it is also ill equipped to meet the increasing Japanese challenge in both domestic and international markets.

Resource Strategy

A large diversified construction firm needs the following important resources: management, skill workers, finance, plant and land bank. Hillebrandt and Cannon (1990) found that the principal resource of construction companies is management. However, in "Investing in Building 2001" (1989) it is said that in the future skilled workers will be needed to improve productivity and to produce high quality and reliable buildings. In terms of finance, the more diversified a company, the more likely it is to have raised capital for long-term investment by the issue of shares or to have to do so in future (Hillebrandt and Cannon 1990). Plant can be purchased or

leased depending on the usages of that particular plant and the financial ability of a firm. Prowting (1992) assert that the most important asset for a house builder continues to be well located building land. This suggests the following hypothesis:

Hypothesis 6: Marketing is likely to be considered as relatively more important than R&D and advanced technology as a functional strategy. In terms of resources, management is likely to be the most important resource for a construction firm.

Financial Performance Measurements

Previous research on the financial performance of the construction industry did not follow any standardised approach in terms of the financial performance measurements (Akintoye and Skitmore 1991; Asenso and Fellows 1987; Grinyer et al 1978; Kangari et al 1992; Ramsay-Dawber 1992; Ramsay-Dawber 1993; and Tafler 1981). However, most of the studies stressed profitability, liquidity and turnover as measures of corporate success. Profitability includes pre-tax profit, ROCE and ROSF whilst liquidity includes cash flow, current ratio and quick ratio. Most of the construction companies' annual reports highlighted pre-tax profit as the main criterion of their success or failure.

Financial Performance Determinants

Profit might be determined by internal factors (through various firms' strategies) and external factors (economic environments). Firms' strategies which have been discussed at corporate, business and functional level include type of activity, geographical spread, cost control and site productivity. However, it was the external factor, i.e. economic condition which was considered as one of the most important

factor in determining the firms' financial performance. This suggests the following hypothesis:

Hypothesis 7: Pre-tax profit is likely to be the most important financial performance measurement followed by cash flow. The financial performance of a construction firm is likely to be more affected by the economic condition rather than by their own strategies.

1.4 Objectives

This study aimed to achieve the following objectives in order to verify the seven above hypotheses:

(a) To investigate the relationships between the construction firms' competitive strategies and their financial performance.

Competitive strategy consisted of the following variables:

- Type of activity;
- Extent of diversification;
- Extent of internationalisation; and
- Level of gearing.

Financial performance as represented by the following variables:

- ROCE;
- ROSF;
- Current ratio;
- Quick ratio; and
- Turnover.

(b) To investigate the appropriate construction firms' strategies in the three different economic periods: boom (1986-1989); recession (1990-1993); and future (1994-onward).

Firms' strategies composed of the following variables:

- Development strategies;
- Functional strategies;
- Resource strategy;
- Strategic financial performance measurements; and
- Strategic financial performance determinants.

1.5 Methodology

This study was phased into two phases, i.e. Phase 1 and Phase 2. Both phases have used a questionnaire survey as a mean of collecting the data. Prior to the questionnaires' development, a sample (the top 120 construction public limited companies) was contacted to provide their annual reports and accounts for the period of 1986 to 1992. In the first phase, data obtained were analysed by using correlation analysis and analysis of variance (Anova) which were performed by the statistical package SPSS for Microsoft Windows release 5.0 (SPSS® for Windows™ Release 5.0). In the second phase, data collected were analysed by using frequency analysis and comparison of means which were also performed by the statistical package SPSS for Microsoft Windows release 5.0. Further explanation about the methodology is presented in Chapter 6.

The sample for this study was drawn from a list of the top 500 construction firms in the UK which was published by Jordan (Britain's Top 500 Construction Companies, 1989). However, only the public limited companies which were normally the parent companies which have their subsidiaries under their management structure were selected. The turnover of these firms ranged from £10 millions to

more than £4000 million per annum. It means that this sample covered all the largest construction firms in the UK.

1.6 Scope and limitation

As discussed above, this study covered the top 120 construction public limited companies in the UK. It means that the outcomes of the study were biased towards the medium and large construction firms in the UK. Data for the first phase of this study were collected within the period of 1986 to 1992 during which the UK economic condition was changing from the boom to the slump. Therefore, the results of the first phase of the study might be appropriate to be referred to during an economic boom and slump. However, in the second phase of the study, data were collected to cover three periods of different economic conditions, i.e. 1986-1989 (boom), 1990-1993 (recession) and 1994 - onward (future or slow recovery). Therefore, the results of the second phase of the study might be appropriate to be referred to during the economic boom, slump, and slow recovery. Even though the outcomes of this study could be generalised to the other parts of the world which have a similar economic system and a similar structure of the construction industry like Britain, they must be treated cautiously so that the differences in the nature of the firms' capability and the economic environments of those parts of the world would be taken into account.

1.7 Guide to The Theses

The theses consists of ten chapters as follows:

Chapter 1 describes problem statements, hypotheses, objectives, methodology, scope and limitation of the research.

Chapter 2 describes firms' strategies which covers concept of strategy, levels of strategy and strategic management. Concept of strategy explains in detail about the word strategy and firm's strategy. It gives various definitions of 'strategy' which are proposed by various authors. Firms' strategic decisions are differentiate from administrative and operational decisions. Levels of strategy which consist of corporate, business and functional are described. Strategic management which includes strategic analysis, strategic choice and strategic implementation is briefly outlined.

Chapter 3 describes construction firms' strategies by following the framework outlined in Chapter 2. It begins by explaining the characteristics of the construction industry which make it different from the manufacturing industry. The characteristics include physical nature of the products, fragmented structure of the industry and the fluctuation in the demand of the construction industry. This is followed by explanation on the strategic management current practice by the construction firms. The remaining sections of the chapter elaborate development strategy, functional strategy and strategic resources of the construction firms.

Chapter 4 explains the financial performance measurement in the construction industry. Firstly, it describes the relationships between firms' strategies and financial performance. Then, various financial performance measurements which include ratio analysis (profitability and solvency), turnover and z-score are detailed.

Chapter 5 explains the main features of the UK economy. The role of government in managing the economy through various policies which include: macroeconomics policy; industrial policy; regional policy; planning and development control; and Single European Market are clarified. Then it describes the UK construction industry in terms of the structure, the output and the global competitiveness.

Chapter 6 outlines the research design and methodology. It is divided into two phases in order to answer the two research questions which have been set out in chapter 1. Phase 1 deals with the relationships between the construction firms' competitive strategy and their financial performance. Phase 2 deals with the construction firms' strategies in the different economic periods.

Chapter 7 contains the analysis of data for the first phase of the study. The financial performance of the sample throughout the period of study is illustrated. The relationships between competitive strategy and financial performance were verified by using two statistical analyses, i.e. correlation and anova.

Chapter 8 consists of the data analysis for the second phase of the study. Frequency analysis was employed to observe a trend which might exist for each strategic variable in each of the three economic periods. The comparison of means was then used to identify the most important strategic variable under various headings within all the periods.

Chapter 9 discusses the empirical findings which have been found in chapters 7 and 8 in relation to the hypotheses which have been set out in chapter 1. The findings will be discussed and supplemented by the qualitative analysis.

Chapter 10 contains the conclusions and suggests areas for further research. Research is suggested to study the reasons for the strategic decisions made by the contractors. It could include a study of strategic thought which attempts to observe the directors' and management's thinking process. Further research is necessary to explore further actions or strategies which could be formulated by the contractors in order to be more resilient towards future turbulent economic environments.

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CHAPTER 2

FIRMS STRATEGIES

2.1 Introduction

The term `strategy' is often misused for a different meaning either in the business world or in other contexts. It is very important to define the actual meaning of strategy if it is to be used in the right perspective. Despite many studies exploring different aspects of corporate strategy, there is no clear consensus on the word's definition. Different authors and managers use the term differently; for example, some include goals and objectives as parts of strategy while others make clear distinctions between them. The objective of this chapter is to provide a comprehensive overview of the word strategy and of firms strategies.

2.2 Concept of Strategy

The word strategy is derived from ancient Greek word `strategia' which connoted the art and science of directing military forces. Cannon (1993) describes the characteristics of strategic decisions which include the following key words: important, long time horizons, involve top decision makers, match activities to resources, demand major resources, deal with unstructured and unique problems, shape the firm's activities, involve subjective judgment, are complex and make evaluation difficult.

Ansoff (1987) classifies business decisions into three categories called strategic, administrative and operating respectively. Operating decisions usually absorb the bulk of the firm's energy and attention. The object is to maximise the efficiency of the firm's resource-conversion process, or, in more conventional language, to maximise profitability of current operations. Administrative decisions are concerned with structuring the firm's resource in a way which creates a maximum performance potential. One part of the administrative problem is concerned with

organisation: structuring of authority and responsibility relationships; work flows; information flows; distribution channels; and location of facilities. The another part is concerned with acquisition and development of resources: development of raw materials sources; personnel training and development; financing; and acquisition of facilities and equipment. *Strategic decisions are primarily concerned with external, rather than internal, problems of the firm and specifically with selection of the product-mix which the firm will produce and the markets to which it will sell.* To use an engineering term, the strategic problem is concerned with establishing an 'impedance match' between the firm and it's environment. In more usual terms, it is the problem of deciding what business the firm is in and what kinds of businesses the firm is in and what kinds of businesses it will seek to enter. Specific questions addressed in the strategic problems are: what are the firm's objectives and goals; should the firm seek to diversify, in what areas, how vigorously; and how should the firm develop and exploit its present product-market position.

Ansoff (1987) further explains that the word strategy is one of several sets of decision-making rules for guidance of organisational behaviour, for example:

- yardsticks by which the present and future performance of the firm is measured. The quality of these yardsticks is usually called *objectives* and the desired quantity goals.
- rules for developing the firm's relationship with it's *external environment*: what products- technology the firm will develop, where and to whom the products are to be sold, and how will the firm gain advantage over competitors. This set of rules is called the product-market or *business strategy.*
- rules for establishing internal relations and processes within the organisation; this is frequently called the *administrative strategy.*
- the rules by which the firm conducts its day-to-day business, called major operating policies.

Mintzberg (1988) stated that human nature insists on a definition for every concept. But the word strategy has long been used implicitly in different ways even if it has traditionally been defined in only one. Explicit recognition of multiple definitions can help people to maneuver through this difficult field. Accordingly, four definitions of strategy are presented by Mintzberg as *a plan [and a ploy], pattern, position and perspective.*

Strategy as a plan (and a ploy)

To almost everyone you care to ask, strategy is a plan - some sort of consciously intended course of action, a guideline (or set of guidelines) to deal with a situation. A child has a strategy to get over a fence, a corporation has one to capture a market. By this definition, strategies have two essential characteristics: they are made in advance of the actions to which they apply, and are developed consciously and purposefully.

As plans, strategies may be in general or can be specific. There is one use of the word in the specific sense that should be identified here. As a plan, a strategy can be a ploy too, really just a specific maneuver intended to outwit an opponent or competitor. A corporation may threaten to expand plant capacity to discourage a competitor from building a new plant. Here the real strategy (as plan, that is, the real intention) is the threat, not the expansion itself, and as such is a ploy.

Strategy as pattern

However, if strategies can be intended (whether as general plans or specific ploy), surely they can also be realized. In other words, defining strategy as a plan is not sufficient; we also need a definition that encompasses the resulting behaviour. Thus a third definition is proposed: strategy is a pattern, i.e., a pattern in a stream of actions. In other words, by this definition, strategy is consistent in behaviour, whether or not intended. Thus, the definitions of

strategy as plan and pattern can be quite independent of each other: plans may go unrealized while patterns may appear without pre-conception.

Strategy as position

The fourth definition is that strategy is a position - specifically, a means of locating an organisation in what organisation theorists like to call an 'environment'. Note that this definition of strategy can be compatible with either (or all) of the preceding ones; a position can be preselected and aspired to through a plan (or ploy) and/or it can be reached, perhaps even found, through a pattern of behaviour.

Strategy as perspective

While the fourth definition of strategy looks out seeking to locate the organisation in the external environment, and down to concentrate positions, the fifth looks inside the organisation, indeed inside the heads of the collective strategists, but up to a broader view. Here, strategy is a perspective, its content consisting not just of a chosen position, but of an ingrained way of perceiving the world. Strategy in this respect is to the organisation what personality is to the individual. This definition suggests above all that strategy is a concept. This has one important implication, namely, that all strategies are abstractions which exist only in the minds of interested parties. What is of key importance about this fifth definition, however, is that the perspective is shared by the members of an organisation, through their intention and/or by their actions.

Quinn (1988) explained that the words strategy, objectives, goals, policy and programs have different meanings to individual readers or to various organisational cultures. Therefore, he attempts to use certain definitions consistently as follows:

Strategy

A strategy is the pattern or plan *that integrates an organisation's major goals, policies, and action sequences into a cohesive whole.* A well-formulated strategy helps to marshall and allocate an organisation's resources into a unique and viable posture based on its relative internal competencies and shortcomings, anticipated changes in the environment, and contingent moves by intelligent opponents.

Goals

Goals (or objectives) state what is to be achieved and when results are to be accomplished, but they do not state how the results are to be achieved. All organisations have multiple goals existing in a complex hierarchy: from value objectives, which express the broad value premises toward which the company is to strive; through overall organisational objectives, which establish the intended nature of the enterprise and the directions in which it should move; to a series of less permanent goals that define targets for each organisational unit, its sub-units, and finally all major program activities within each subunit. *Major goals - those that affect the entity's overall direction and viability - are called strategic goals.*

Policies

Policies are rules or guidelines that express the boundaries within which action should occur. These rules often take the form of contingent decisions for resolving conflicts among specific objectives. For example:"Don't exceed three months' inventory in any item without corporate approval." Like the objectives they support, policies exist in a hierarchy throughout the organisation. *Major policies - those that guide the entity's overall direction and posture or determine its viability - are called strategic policies.*

Programs

Programs specify the step-by-step sequence of actions necessary to achieve major objectives. They express how objectives will be achieved within the limits set by policy. They ensure that resources are committed to achieving goals, and they provide the dynamic track against which progress can be measured. *Those major programs that determine the entity's overall thrust and viability are called strategic programs.*

Strategic decisions

Strategic decisions are those that determine the overall direction of an enterprise and its ultimate viability in the light of the predictable, the unpredictable, and the unknowable changes that may occur in its most important surrounding environments. They intimately shape the true goals of the enterprise. They help delineate the broad limits within which the enterprise operates. They dictate both the resources the enterprise will have accessible for its tasks and the principal patterns in which these resources will be allocated. And they determine the effectiveness of the enterprise - whether its major thrusts are in the right directions given its resource potentials - rather than whether individual tasks are performed efficiently. Management for efficiency, along with myriad decisions necessary to maintain the daily life and services of the enterprise, are the domain of operations.

Johnson and Scholes (1993) describe the characteristics of the words `strategy' and `strategic decision' as follows:

(a) Strategic decisions are likely to be concerned with *the scope of an organisation's activities*: does (and should) the organisation concentrate on one area of activity, or does it have many? The issue of scope of activity is fundamental to strategic decisions because it concerns the way in which those

responsible for managing the organisation conceive its boundaries. It is to do with what they want the organisation to be like and to be about.

(b) Strategy is to do with the *matching of the activities of an organisation to the environment in which it operates.*

(c) Strategy is also to do with the *matching of the organisation's activities to its resource capability.* It is not just about countering environmental threats and taking advantage of environmental opportunities; it is also about matching organisational resources to these threats and opportunities. There would be little point in trying to take advantage of some new opportunity if the resources needed were not available, or if the strategy was rooted in an inadequate resource base.

(d) Strategic decisions therefore often *have major resource implication* for an organisation.

(e) Strategic decisions are therefore likely to *affect operational decisions*, to 'set off waves of lesser decisions'.

(f) The strategies of an organisation will be *affected not only by environmental forces* and resource availability, *but also by the values and expectations of those who have powers in and around the organisation.* In some respects, strategy can be thought of as a reflection of the attitudes and beliefs of those who have most influence on the organisation.

(g) Strategic decisions are likely to *affect the long-term direction* of an organisation.

Overall, if a definition of a strategy is required, these characteristics can provide a basis for one. *Strategy is the direction and scope of an organisation over the long term: ideally, which matches its resources to its changing environment, and in particular its markets, customers or clients so as to meet stakeholder expectations.*

Stahl and Grigsby (1992) stress that three factors distinguish strategic decisions from other business considerations:

(a) strategic decisions deal with concerns *that are central to the livelihood and survival* of the entire organisation and usually involve a large portion of the organisation's resources;

(b) strategic decisions *represent new activities or areas of concern and typically address issues unusual for the organisation* rather than issues that lend themselves to routine decision making and

(c) strategic decisions have repercussions for the way other, lower-level decisions in the organisation are made.

Readings through a number of definitions above shows clearly that the word strategy has a very broad meaning and is used in many approaches in different contexts. The meaning given includes all aspects of important decisions for a company to become viable in its environment. Hax and Majluf (1991) conclude that the concept of strategy embraces the overall purpose of an organisation. It is not surprising, therefore, that many dimensions are required for its proper definition. All of them are meaningful and relevant and contribute to a better understanding of the strategic tasks. By taking into account of all those definitions, they proposed a more comprehensive definition of strategy.

Strategy:

(a) is a coherent, unifying, and integrative pattern of decisions;

(b) determines and reveals the organisational purpose in terms of long-term objectives, action programs, and resource allocation priorities;

(c) selects the businesses the organisation is in or is to be in;

(d) attempts to achieve a long-term sustainable advantage in each of its businesses, by responding properly to the opportunities and threats in the firm's environment, and the strengths and weaknesses of the organisations;

(e) engages all the hierarchical levels of the firm (corporate, business, functional); and

(f) defines the nature of the economic contributions it intends to make to its stakeholders.

This is the true nature of strategy that will be studied within the construction companies in this research work. The study will investigate the past, the present and the future strategy of the construction industry.

2.3 Levels of Strategy

Hax and Majluf (1991) argue that there are three basic conceptual hierarchical levels which have always been identified as the essential layers of any formal planning process: corporate, business and functional or operational levels. At the corporate level reside the decisions which, by their nature, should be addressed with full corporate scope. At the business level reside the main efforts aimed at securing the long-term competitive advantage in all the current businesses of the firm. Business managers are supposed to formulate and implement strategic actions congruent with the general corporate direction, constrained by the overall resources assigned to the particular business unit. Finally, functional strategies not only consolidate the functional requirements demanded by the composite of businesses of the firm but also constitute the depositories of the ultimate competitive weapons to develop the unique competencies of the firm.

2.3.1 Corporate Strategy

Ohmae (1982) poses a question on what is a corporation? He explains that there are really three kinds of corporation: single-product, conglomerate, and diversified. The strategy of a single-product company that is not planning to diversify is identical with business unit strategy. Conglomerates and diversified corporations, however, are each a very different matter. While the conglomerate tries to maximise the wealth of the stockholders by such financial measures as resource allocation, especially allocation funds, the diversified company goes a step further. It tries to maximise the wealth of the corporation by exploiting synergy (cross-fertilisation of strengths) between its various businesses.

Hax and Majluf (1991) believe that strategic tasks at the corporate level have enormous significance because they are the fundamental mechanism allowing top management to provide a sense of vision and leadership. On a more pragmatic dimension, the central issue behind the strategic corporate tasks is the question of how to add value at the corporate level. Corporate tasks are those that need the firm's full scope to be properly addressed. If delegated at a lower level, managers will not be able to make the trade-off between the benefits received by their own unit and the adverse effects to other units within the firm. With that criterion in mind, ten tasks are identified at the corporate level.

(a) The mission of the firm: choosing competitive domains and the way to compete.

(b) Business segmentation: selecting planning and organisational focus.

(c) Horizontal strategy: pursuing synergistic linkages across business units.

(d) Vertical integration: defining the boundaries of the firm.

(e) Corporate philosophy: defining the relationship between the firm and stakeholders.

(f) Special strategic issues: identifying current key subjects of strategic concern.

(g) Strategic posture of the firm: identifying strategic thrusts; corporate, business and functional planning challenges; and corporate performance objectives.

(h) Portfolio management: assigning priorities for resource allocation and identifying opportunities for diversification and divestment.

(i) Organisational structure and administrative systems: adjusting the organisational structure, managerial processes, and systems in consonance with the culture of the firm to facilitate the implementation of strategy.

(j) Human resource management of key personnel: selection, development, appraisal, reward, and promotion.

Figure 2.1 depicts the fundamental elements in the definition of the ten tasks of corporate strategy proposed by Hax and Majluf (1991).

Stahl and Grigsby (1992) describe those corporate level strategic decisions which deal with the question "What business(es) should we be in?" By definition, a decision implies that a choice is made among alternatives. These decisions may result in an overall mission statement such as "the mission of Apple Computers is to design, manufacture, and market personal computers to the business, educational, and professional user". Once such a mission statement has been decided on, the organisation is left with the decisions of how to enter, improve or exit the chosen business(es). This stage usually involves choices among new alternative activities. These dicisions may be further classified as the six separate corporate-level strategies shown in Table 2.1 (Stahl and Grigsby 1992)

Section 2.4.2 will further describe the strategic choices which include expansion, retrenchment, and status-quo (which represent the company direction) and also internal expansion, acquisition, joint venture, merger, and diversification (which represent strategic mode of the company).

2.3.2 Business Strategy

Hax and Majluf (1991) claim that out of the three hierarchical levels that we recognise as the central focus for strategic thinking in an organisation - the corporate, business, and functional levels - the business level is the core of managerial actions. Business strategy attracts prime executive attention, and many of the concepts and methodologies required to understand the business strategic tasks are also central to the comprehension of corporate and functional strategic issues.

A strategic business unit (SBU) is an operating unit or a planning focus that groups a distinct set of products or services sold to a uniform set of customers, facing a well-defined set of competitors. There are two key sets of factors in deciding how to position the business within its competitive environment: (1) factors that determine the attractiveness of the industry pertaining to the business, as measured primarily by

its long-term profitability prospects; and (2) factors that determine the relative advantage of the business with respect to competitors in the industry.

Hax and Majluf (1991) assert that the following considerations are important to bear in mind in describing a strategic business unit.

(a) An SBU is intended to serve an external market, not an internal one. This means that an SBU should have a set of external customers and not just as an internal supplier.

(b) An SBU should have a well-defined set of external competitors, with respect to whom we are attempting to obtain a sustainable advantage.

(c) The SBU manager should have sufficient independence in deciding the critical strategic actions. This does not mean that the SBU manager could not share resources such as manufacturing facilities, sales force, procurement, services , technologies, and the like from other business units existing in the firm. It simply means that the SBU manager is free to choose from where to obtain the necessary resources and how to compete effectively.

(d) If the three conditions just stated are met, an SBU becomes a genuine profit centre, totally accountable for the profitability.

(e) Finally, an SBU does not necessarily need to have a well-defined organisational unit with a line manager in charge to be regarded as a legitimate SBU. In an organisation structured along functional lines participating in a variety of markets and facing several distinct sets of competitors, it would not be feasible to match the SBU segmentation with the organisational structure.

Figure 2.2 demonstrates the fundamental elements in the definitions of a business strategy.

Hay and Williamson (1991) summarise the distinction between corporate and business unit strategy as shown in table 2.2. A summary such as this inevitably runs the risk of implying that between corporate and business-unit strategy there is a hard and fast distinction. That impression is misleading. Although strategy at these two levels is concerned with separate sets of issues, the boundary is often blurred. Overlaps occur, corporate influence often has a profound effect upon the strategy of an individual business unit, and indeed, the business unit itself is, in a sense, the vehicle through which corporate strategy is realised. Decisions made at the centre, at the corporate level, such as those relating to acquisition or divestment, are *de facto* decisions about the positioning of a business in relation to the product market and competitors within that market. Therefore, rather than accentuating the distinction, the most fruitful way of viewing these two dimensions of strategy, about which there is often confusion, is to see them as being part of a seamless web. A web in which the strategy which is pursued at different levels throughout the corporation is completely coherent and consistent.

Table 2.2 - The distinction between corporate and business unit strategy

2.3.3 Functional Strategy

The building blocks of any business consist of groups of individuals or units who perform specific activities or functions. Those performing essentially similar activities are usually grouped together under headings such as `finance', `marketing', `R&D', `manufacturing', `personnel,' and so forth. Each such grouping represents a functional area or department. Evolving effective strategies for each such functional area is an integral part of the strategy process (Hay and Williamson 1991).

Hax and Majluf (1991) believe that of the three levels of corporate, business and functional, the functional dimension has been probably the most neglected in America. They believe that this neglect has been one of the central sources of the decline of global competitiveness in that country. Dealing with functions strategically means to be aware of what competitors are doing in terms of developing unique capabilities, and being able to match or exceed their competencies.

Figure 2.3 displays the fundamental elements in the definition of a functional strategy. First, the corporate strategy provides a most important initial input. It defines basic requirements that the functional strategy has to attend; it specifies targets and scope for the functional strategy. Likewise, the business strategies carry an enormous functional impact. The statement of business mission has a similar relevance as the mission of the firm, except that the functional implications tend now to be sharper and more detailed, having as a central objective to support the desired competitive position of the business unit.

(Source: Hax and Majluf, 1991)

2.4 Strategic Management

The nature of strategic management is different from other aspects of management (Johnson and Scholes 1993). Table 2.3 summarises some of these differences. An individual manager is most often required to deal with problems of operational or functional control, such as the efficient production of goods, the management of a sales force, the monitoring of financial performance or the design of some new system that will improve the efficiency of the operation or function. These are all very important tasks, but they are essentially concerned with effectively managing a limited part of the organisation within the context and guidance of a more overarching strategy. Operational or functional control is what managers are involved in for most of their time. It is vital to the effective implementation of strategy, but it is not the same as strategic management.

Strategic management is concerned with taking decisions about major issues facing the organisation and ensuring that the strategy is put into effect. It can be thought of as having three main elements within it There is a strategic analysis, in which the strategist seeks to understand the strategic position of the organisation. There is strategic choice, which is to do with the formulation of possible courses of action, their evaluation and the choice between them. And there is strategy implementation, which is concerned with planning how the choice of strategy can be put into effect, and managing the changes required.

2.4.1 Strategic Analysis

Strategic analysis is concerned with understanding the strategic position of the organisation. What changes are going on in the environment, and how will they affect the organisation and its activities. What is the resource strength of the organisation in the context of these changes? What is it that those people and groups associated with the organisation - managers, shareholders or owners, unions and so on - aspire to, and how do these affect the present position and what could happen in the future?

Table 2.3 - Strategic Management and Operational Management

2.4.1.1 Strategic Group Analysis

Strategic group analysis is a methodology which has been used by many researchers in the area of strategic management. The term "strategic group" was used by Hunt (1972) in his doctoral dissertation on the competition in the home appliance industry. Since that time a growing body of literature both theoretical and empirical, has adopted this concept (for reviews see Porter 1979; Cool 1985; McGee and Thomas 1986; Fiegenbaum 1987; Fiegenbaum and Thomas 1990; and Lewis and Thomas 1990). A focal theme in the strategic groups' literature is that there is a theoretical relationship between strategic groups and financial performance. In particular, it is argued that profitability may differ systematically among groups in an industry because of mobility barriers, market factors and firm specific asset profiles.

Johnson and Scholes (1993) believe that strategic group analysis can help build on competitor analysis so as to gain an understanding of the positioning of an organisation in relation to the strategies of other organisations. It poses the question:

who are the most direct competitors, and on what basis is competition likely to take place?

Hunt (1972) defines a strategic group to characterise the strategic environment within the industry as a group of firms within the industry that are highly symmetric ... with respect to cost structure, degree of product differentiation, degree of vertical integration, and the degree of product diversification ... formal organisation, control systems, and management rewards and punishments ... (and) the personal views and preferences for various possible outcomes. Porter (1980) provides the accepted definition of a strategic group in terms of the similarity of competitive behaviour. A strategic group is the group of firms in an industry following the same or similar strategy along the strategic dimension ... usually, however, there are a small number of strategic groups which capture the essential strategic differences among firms in the industry. Cool and Schendel (1987) define a strategic group as a set of firms competing within an industry on the basis of similar combinations of scope and resource commitments.

On the basis of the above definitions, an industry could have only one strategic group if all firms followed essentially the same strategy. At the other extreme, each firm could be a different strategic group. Usually, however, there are a small number of strategic groups which capture the essential strategic differences among firms in the industry.

The first step in structural analysis within industries is to characterise the strategies of all significant competitors along these dimensions. This activity then allows for the mapping of the industry into strategic groups. Companies' strategies for competing in an industry can differ in a wide variety of ways. However, the following strategic dimensions usually capture the possible differences among a company's strategic options in a given industry (Porter 1980):

specialisation: the degree to which it focuses its efforts in terms of the width of its line, the target customer segments, and the geographic markets served;

brand identification: the degree to which it seeks brand identification rather competition based mainly on price or other variables. Brand identification can be achieved via advertising , sales force, or a variety of other means;

push versus pull: the degree to which it seeks to develop brand identification with the ultimate consumer directly versus the support of distribution channels in selling its product;

channel selection: the choice of distribution channels ranging from company-owned channels to specialty outlets to broaden outlines;

product quality: its level of product quality, in terms of raw materials, specifications, adherence to tolerance, features and so on;

technology leadership: the degree to which it seeks technology leadership versus following or imitation;

vertical integration: the extent of value added as reflected in the level of forward and backward integration is adopted;

cost position: the extent to which it seeks the low cost-position in manufacturing and distribution through investment in cost minimising facilities and equipment;

service: the degree to which it provides ancillary services with its product line, such as engineering assistance, an in-house service network, credit and so forth;

price policy: its relative price position in the market. Price position will usually be related to such other variables as cost position and product quality, but price is a distinct strategic variable that must be treated separately;

leverage: the amount of financial leverage and operating leverage it bears;

relationship with parent company: requirements on the behaviour of the unit based on the relationship between a unit and its parent company;

relationship to home and host government: in international industries, the relationship the firm has developed or is subject to with its home government as well as host government in foreign countries where it is operating.

Each of these strategic dimensions can be described for firms at differing levels of detail, and other dimensions might be added to refine the analysis. The important thing is that these dimensions provide an overall picture of the firm's competitive strategic decisions.

Today, more than twenty years after the publication of Hunt's study, there is much confusion about the implementation of the strategic group concept (McGee and Thomas 1986). The main problem is that different researches have used different

measures to describe the firms' strategies. They range from one variable (e.g. size of firms) to many variables (e.g. mixed variables: advertising, R&D, assets, business unit sales and market share) as shown in table 2.4 which demonstrates the previous studies on strategic grouping.

2.4.2 Strategic Choice

Strategic analysis provides a basis for strategic choice. This aspect of strategic management can be conceived of as having three parts (a) generation of strategic options, (b) evaluation of strategic options, and (c) selection of strategy. In many ways strategic choice is the core of corporate strategy. It is concerned with decisions about an organisation's future and the way in which it needs to respond to many pressures and influences identified in strategic analysis. In turn, the consideration of future strategies must be mindful of the realities of strategy implementation, which can be a significant constraint on strategic choice (Johnson and Scholes 1993).

In understanding strategic choice, it is important to distinguish between three elements of strategy as shown in Figure 2.4 (Johnson and Scholes 1993).

(a) *Generic strategies*, the bases on which an organisation might seek to achieve a lasting position in its environment: for example, through competitive advantage or user benefit. The discussion acknowledges, in particular, the important work of Porter.

(b) *Alternative directions*, in which the organisation may choose to develop within its generic strategy: for example, through developing new products or markets.

(c) *Alternative methods*, by which any direction of strategic development might be achieved: for example, through internal development, acquisition or alliances.

Table 2.4 - Previous Studies on Strategic Group Analysis

Study	Industry	Basis for strategic group formation
Hunt [1972]	White Goods	Product line basis • Degree of product diversification • Differences in product differentiation • Extent of vertical integration
Newman [1973,1978]	34 four digit producer goods, industries: chemical process	Degree of vertical integration
Porter [1973]	38 three-digit consumer goods industries	Relative size of firm • Leader/Follower • Classification
Hatten [1974]; Hatten and Schendel [1977]	Brewing industry	Manufacturing variables • Number, age, capital, intensity of plant Marketing variables • Number of brands, price, and receivables/sales
Hatten et al [1978]	Brewing industry	Manufacturing, Marketing and Financial Variables • [leverage, merger/acquisition behaviour]
Harrigan [1980]	*Declining industries:* receiving tubes, synthetic soda ash, baby foods, acetylene, percolator, cigar, lether, tanners, rayon	*Dimension of firms* • strategic posture: strategic mapping used to identify groups
Caves and Pugel [1980]	US manufacturing industry - sample	Relative size of firms
Oster [1982]	19 consumer goods industries from compusat	Product strategy • Advertising/sales ratio
Ramsler [1982]	Banking industry - 100 largest non-US banks	Product market differentiation, size, geographic scope

(Source: McGee and Thomas 1986)

Table 2.4 - Previous Studies on Strategic Group Analysis [cont'd]

Study	Industry	Basis for strategic group formation
Ryans and Wittink [1982]	Airline industry	Financial strategy • Clustering of residual from capital asset pricing model [security returns]
Baird and Sudharsan [1983]	Office equipment/electric computing	Financial strategy variables • Leverage, current ratio, return on assets, dividend payment ratio, time interest earned, size
Primeaux [1983]	Textile, petroleum	Size: investment behaviour
Howell and Frazier [1983]	Medical supply and equipment	Customer groups served; customer needs served [due to Abell, 1980]
Hayes et al [1983]	Investment banking	Logit analysis involving match between characteristics of investment bank and characteristics of individual customers; four main grouping identified
Hergert [1983]	2540 SBUs representing 50 industries; broad sample of US manufacturing industry	Mix of variables: • Advertising/sales • R&D/sales • Assets/sales • Business unit sales/parent sales • Market share
Dess and Davis [1984]	Paints and allied products	A range of 21 markting variables
Hawess and Crittenden [1984]	Supermarkets	Marketing strategy: target market; product; promotion; price; buying and display
Lathi, A [1983]	Finnish knitwear industry	Size: small, medium, large; nature of the product group
Hatten and Hatten [1985]	Brewing	Marketing strategy variables: Price, advertising, number of brands and national relative market share

(Source: McGee and Thomas 1986)

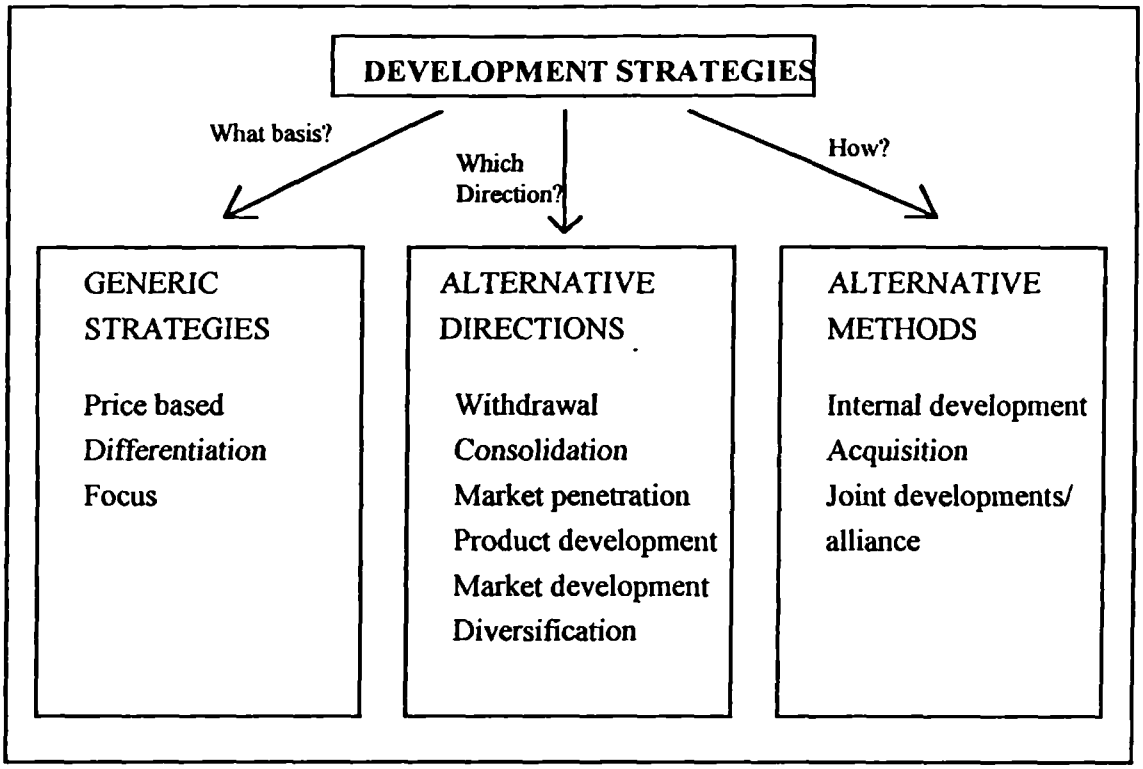

Figure 2.4 - Development Strategies

(Source: Johnson and Scholes, 1993)

2.4.2.1 Generic Strategies

Porter (1980) argued that there are three fundamental ways through which firms can achieve sustainable competitive advantage.

(a) *A cost leadership strategy*, where a firm sets out to become the low cost producer in its industry ... a low cost producer must find and exploit all sources of cost advantage. Low cost producers typically sell a standard, or no-frills, product and place considerable emphasis on reaping scale or absolute cost advantages from all sources ... If a firm can achieve and sustain overall cost leadership, then it will be an above average performer in its industry provided it can command prices at or near the industry average.

(b) *A differentiation strategy*, which Porter defines as seeking to be unique in its industry along some dimensions that are widely valued by buyers ... It is rewarded for its uniqueness with a premium price ... A firm that can achieve

and sustain differentiation will be an above-average performer in its industry if its price premium exceeds the extra cost incurred in being unique ... The logic of the differentiation strategy requires that a firm chooses attributes in which to differentiate itself that are different from its rivals.

(c) *A focus strategy* based on the choice of a narrow competitive scope within an industry. The focuser selects a segment or group of segments in the industry and tailors its strategy to serving them to the exclusion of others. There are two variants here. In cost focus a firm seeks a cost advantage in its target segment, while in differentiation focus a firm seeks differentiation in its target segment.

2.4.2.2 Directional Strategies

This section sets out the strategic directions that an organisation could take. The framework takes the form of a set of product or market choices summarised in Figure 2.5. However, it has to be acknowledge that this is an essentially environment-led perspective: it assumes that environmental opportunities for growth exist which organisations are able to take advantage of. While this may be the case for many organisations, others may not be in such circumstances. For example, organisations in stable environments or declining market situations may be mainly concerned with the development of particular core competence of a specialist nature, or with the development of greater efficiency of resource utilisation, or even with the prospect of planning withdrawal from a market (Ansoff 1987; Johnson and Scholes 1993).

There are a number of directional strategies which could be followed by a firm to develop in a different environment which include withdrawal, consolidation (status-quo), product development, market development and diversification.

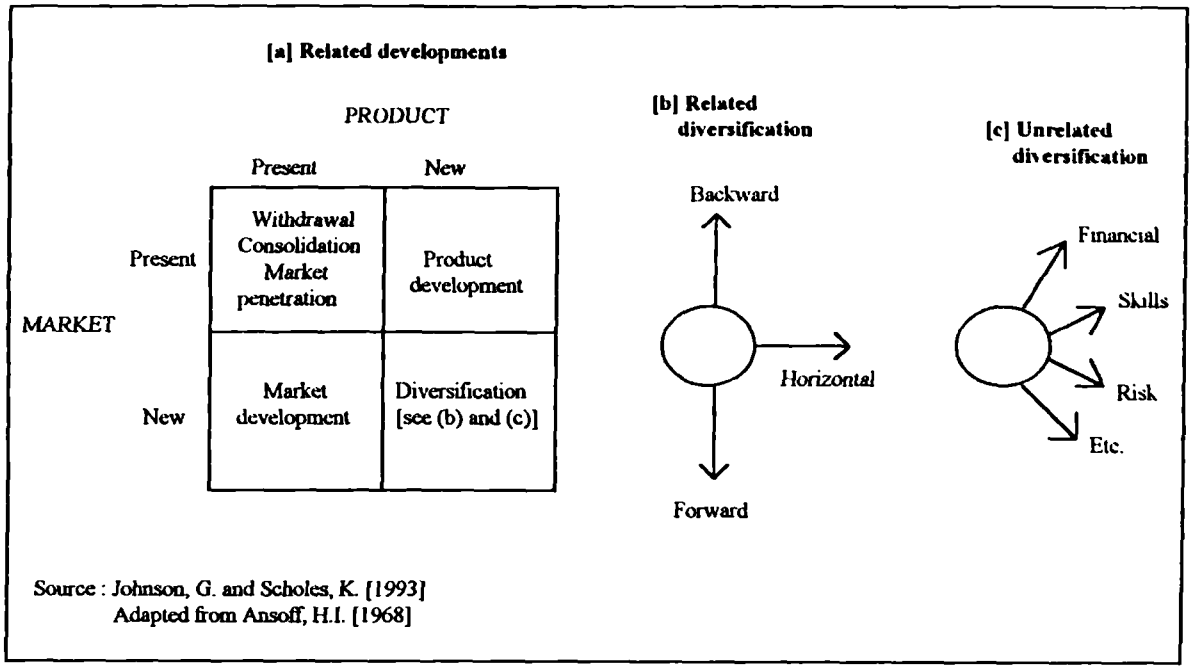

Figure 2.5 - Directional Strategies for Developments

2.4.2.2.1 Withdrawal

Johnson and Scholes (1993) believe that this is an option which is often overlooked, although there are many circumstances where complete or partial withdrawal from a market would be the most sensible course of action. For example, declining performance may argue for the withdrawal from some activities to raise funds, or cut losses, as part of a consolidation or growth strategy for the corporation as a whole.

2.4.2.2.2 Consolidation (status-quo)

Johnson and Scholes (1993) argue that consolidation implies changes in the ways the company operates, although the range of products and markets may remain unchanged. A company which is operating in markets showing high levels of growth may aim to maintain market share by growing with the market. However, in mature markets, it is common for organisations to defend their position by placing an increased emphasis on quality (or product or service), by increasing marketing

activity, or by improving cost structure through productivity gains and/or higher capital intensity. Any of these could provide barriers to the entry of new competitors.

2.4.2.2.3 Product Development

A business may decide that consolidation in its present products or market does not present adequate opportunities, and will search for alternatives which build upon the company's present knowledge and skills. In the case of product development the company maintains the security of its present markets while changing products or developing new ones (Johnson and Scholes 1993).

2.4.2.2.4 Market Development

In the case of market development the organisation maintains the security of its present products while venturing into new market areas. Market development can include entering new market segments, exploiting new uses for the product or spreading into new geographic areas. Of course, market development and product development may go hand in hand, since the move into a new market segment may require developments of variants to the existing product range (Johnson and Scholes 1993).

2.4.2.2.4 Diversification

Diversification is a term used in different ways. It may be used to identify directions of development which take the organisation away from both its present products and its present market at the same time. However, it is convenient to divide diversification into two broad types (Johnson and Scholes 1993):

(1) ***Related Diversification*** is development beyond the present product and market but still within the broad confines of the industry within which the company operates, and may typically take the following forms:

(a) *Backward integration* refers to development into activities which are concerned with the inputs into the company's current business. For example, raw materials, machinery and labour are all important inputs into a manufacturing company.

(b) *Forward integration* refers to development into activities which are concerned with a company's outputs, such as transport, distribution, repairs and servicing.

(Vertical integration is a broader term used to described either backward or forward integration)

(c) Horizontal integration refers to development into activities which are competitive with, or directly complementary to, a company's present activities.

(2) ***Unrelated Diversification*** is development beyond the present industry into products or markets which, at face value, may bear no clear relationship to the present product or market.

There are many value activities both upstream and downstream of a company's operation which provide bases for related diversification. These are shown in Figure 2.6. Table 2.5 summarises some possible advantages for related diversification. On the other hand, some reasons for unrelated diversification are displayed in Table 2.6.

2.4.2.3 Method Strategies

The previous sections have been concerned with the generic basis on which organisations might sustain competitive advantage. However, for each of these alternatives there are different potential methods of developments. These methods can be divided into four types: internal development; acquisition; joint venture (alliance); and merger.

Internal development (organic growth)

For many organisations internal development has been the primary method of strategic development, and there are some compelling reasons why this should be so. Particularly with products which are highly technical in design or method of manufacture will choose to develop new products themselves since the process of development is seen as the best way of acquiring the necessary skills and knowledge to exploit the product and compete successfully in the market place (Johnson and Scholes 1993).

Table 2.5 - Some reasons for related diversification

Possible advantages	Examples/comments
1. Control of supplies • Quality • Quantity • Price	Tea processors own plantations to secure continuity of supply. Components for motor cars may need to be manufactured by the company. Printing facility can be cheaper if in-house.
2. Control of markets	UK shoe manufacturers own retail outlets to gain guaranteed distribution.
3. Access to information	Shoe manufacturers are involved in machinery companies to keep abreast of developments.
4. Cost savings	Fully integrated steel plants save cost on reheating and transport.
5. Building on: expertise and technology	Firm of accountants moving into tax advice or corporate recovery. Precision engineering equipment manufacturer in one market entering another with similar technical requirements.
6. Spreading risk	Avoids overreliance on one product/market but builds on related experience
7. Resource utilisation	Underutilised manufacturer acquiring company for compatible products to fill capacity.

(Source: Johnson, G. and Scholes, K., 1993)

Table 2.6 - Some reasons for unrelated diversification

However, Hay and Williamson (1991), argue that sustaining highly profitable organic growth is notoriously difficult to achieve, for a variety of reasons, including resource limitations like physical plant, space, staff, and particularly for smaller companies, management time. Growth requires investment, usually at the expense of profitability - at least in the shorter term; a conspicuous feature of organic growth in small to medium-sized companies is a dramatic increase in size, as measured by turnover, accompanied by an equally dramatic decrease in profitability. Another key

problem is that of time. Whereas an acquisition can have a strikingly quick effect upon a company, organic growth is, by its very nature, a much slower process. The principal appeal of internal, organic growth is that it is relatively controllable; it builds upon the firm's existing skills and can be achieved without loss of competitive focus. In pursuing a strategy of organic growth it is essential to be clear about (a) the precise ways in which such growth will be achieved; (b) the increasing difficulty of sustaining adequate rates of growth as the firm grows; and (c) as in all strategy, what exactly are we trying to achieve, maximum revenue growth or profitability - often two very different things.

Acquisition

According to Hay and Williamson (1991) acquiring a company means buying an existing strategy which may account for much of the company's existing profit and worth. Therefore, it is essential to take the time to understand how the new strategy of the firm might affect its performance. Countless acquisitions are consummated each year, yet research has shown that after the event more than 50 percent of the management involved are disappointed with the results (Hay and Williamson 1991). Even so, acquisition is often heralded as the fastest way to gain a position in a market where greenfield entry would require time-consuming and uncertain building of teams, business systems, customer and supplier relationships.

Jones (1982) argues that acquisitions are frequently justified on the ground of rationalisation and the potential for the realisation of economies of scale. In addition to many reasons embraced by economies of scale there are others which may be grouped into three categories: (a) growth, this may be achieved by increasing the share of market or by entering new markets; (b) skills, acquisition can capture new products, processes, patents, research and developments skills as well as human abilities which it would take an unacceptably long time to generate by organic growth; and (c) financial, benefits can be obtained by acquiring companies with tax

losses or capable of strong cash flow generation - 'cash-cows'. However, there is increasing evidence that casts doubt on the significance of economies of scale and demonstrates that profitability is independent of size. It seems likely that acquirers fail to think deeply enough about how they will achieve potential benefits and fail to recognise the problems that will be met.

Johnson and Scholes (1993) also argue that a compelling reason to develop by acquisition is the speed with which it allows the company to enter new product/market areas. In some cases the product and/or market are changing so rapidly that this becomes the only way of successfully entering the market, since the process of internal development is too slow. Another reason for acquisition is the lack of knowledge or resources to develop a strategy internally. However, the overriding problem with acquisition lies in the ability to integrate the new company into the activities of the old. This often centres around difficulties of cultural fit.

Merger

A merger is a "marriage between two companies, usually of roughly the same size. The assets become vested in one company. It is effected by the shareholders of the one or both parties exchanging their existing shares for new shares in the other or a newly created company. "Merger" implies the willing co-operation of each party and avoids any implication that one party is dominant. However, true mergers, in which all partners relinquish their independence in favour of a new comprehensive policy are rare (Jones 1982).

Reasons for mergers may be similar to those for acquisitions. However, mergers are more typically the result of organisations coming together voluntarily; and this is likely to be because they are actively seeking synergistic benefits, perhaps as a result of the common impact of a changing environment in terms of either opportunities or threats (Johnson and Scholes 1993).

Joint Ventures (strategic alliances)

Hay and Williamson (1991) explain that the most common joint ventures were the joint companies formed to manufacture and/or distribute a product in a new region where one party provided the product experience and the other expertise in the local, often developing country market. These alliances generally involved relatively simple horizontal or vertical relationships between two non-competitors. More recently, there have been a growing number of strategic alliances between competitors. The object of these is often to fill some gaps in the resources required by each party to pursue their chosen strategies. It is hoped that the alliance will allow access to the strengths of the party which can be used to increase the competitiveness of each firm in the global market.

The new style alliances tend not to be all-encompassing. The parties co-operate in some areas while competing in others. They often involve complex combinations of capabilities, personnel and assets, rather than simple, vertical relationships. Their intended life is commonly shorter than traditional joint ventures. When considering the creation of a strategic alliance, there are six key questions that should be borne in mind.

(a) What specific problem are we trying to solve?

(b) How will we capture the benefits accruing from the alliance?

(c) Is our organisation sufficiently receptive to gain from the intended transfers?

(d) How can we control "encroachment" by our partner in the alliance?

(e) How will we exit the alliance and realise its value?

(f) What form of organisation and structure should the alliance have?

Johnson and Scholes (1993) believe that joint development of new strategies has become increasingly popular since the early 1970s. This is because organisation cannot always cope with increasingly complex environments from internal resources

alone. They may see the need to obtain materials, skills, know-how, finance or access to markets, and recognise that these may be as readily available through co-operation as through their ownership.

2.4.3 Strategy Implementation

Strategy implementation is concerned with the translation of strategy into action. Strategic analysis and choice are of little value to an organisation unless the strategies are capable of being implemented. Strategic change does not take place simply because it is considered to be desirable; it takes place if it can be made to work.

Reed and Buckley (1988) suggest that new strategies are selected because they offer opportunities and potential benefits. However, their implementation involves changes and this implies risk. Therefore, strategic implementation should seek to maximise benefits and minimise risks.

Strategy implementation is likely to involve three major tasks: planning and allocating resources; organisational structure and development; and managing strategic change. Planning and allocating resources is concerned with how resources will have to be reallocated given strategic change. It does this at two levels: at the corporate level, where the problem is the allocation of resources between different parts of the organisation (e.g. between different businesses in a conglomerate); and at the operating unit (or business) level, where the problem is the provision and allocation of resources between departments, functions or projects. Organisational structure and development deals with a critical resource of any organisation, that is the people who work for it. It is clear that changes in strategy are likely to give rise to the need to reorganise how people are managed. Finally, a firm must have the capability and the mechanism to manage the strategic change. The expected outcomes of the strategic changes are both the effectiveness and the efficiency of an organisation.

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CHAPTER 3

CONSTRUCTION FIRMS' STRATEGIES

3.1 Introduction

This chapter describes the construction firms' strategies which were being practiced either explicitly or implicitly. It begins by explaining the characteristics of the construction industry which affect the firms' strategies. Then the current strategic management practice of the construction firms will be reported. Construction firms' strategic options which are part of the strategic management process will be discussed as the main content of this chapter. The construction firms' strategies could be deduced from the practices of the construction firms in the present or in the past, either from literature reviews or from the construction companies' annual reports. At the end of the chapter the strategic resources of the construction firms will be outlined.

3.2 Characteristics of the Construction Industry

The construction industry has a number of characteristics which make it different from manufacturing industries. These characteristics are important in shaping the nature of the construction firms' strategies. These characteristics are concerning the physical nature of the products, the fragmented structure and the fluctuation in the demand.

3.2.1 The Physical Nature of the Products

The final products of the construction industry are unique in terms of location, design, size, and price. They are located at fix positions and are normally not movable. Their location are geographically widely spread - local, national or international. It means that the location demand is critically important in the construction sector. Since the

late 1970s many large UK civil engineering firms systematically searched for demand in overseas markets, since demand for their services has fallen significantly at home.

Each product has its own design and specification which differentiate each of them. The size is normally large and heavy [either buildings like houses, shopping complexes, stadia, and hospitals or civil engineering work such as dams, motorways, bridges, and tunnels]. Therefore, it is not surprising if these products are expensive. Today, often the major construction projects which are too big and too expensive make it impossible to be constructed by one contractor with its own resources.

Clearly the physical nature of the construction products which have been described above require a different set of strategies which are not similar to manufacturing industries. In manufacturing industries, the products are normally standardised and produced along the production lines. It means that most of the firms' strategies which have been developed for the manufacturing firms are not readily usable for the construction firms. Therefore, these strategies should be modified so that they would be more appropriate for the construction firms.

3.2.2 Fragmented Structure

It is a well-known fact that the construction industry is highly fragmented. It is fragmented often because many parties are involved with different goals and can have adversarial roles. It includes public and private owners; architects and engineers from different specialisms; construction managers, general contractors, and specialist contractors; regulatory agencies; labour organisations; and suppliers of construction materials and equipment. All these parties are potentially confrontational and their individual goals and objectives are many, often conflicting and can even be mutually

exclusive; what owners want in a project may not always fully coincide with what the designer's intent is, or the motivation of the constructors. (Krippaenhe 1992).

The traditional structure of the construction industry causes a waste of key resources, encourages delay and additional costs and can obstruct the free flow of information vital to a construction project. To illustrate the problems, Jardine and Cornick (1990) give the following example: *A contractor who is already late receives a design detail that he perceives is incorrect, for example a reinforcement bending schedule. Under the traditional structure it may be in the contractor's best interest to delay the discovery of the error until the steel fixers try unsuccessfully to install the bars. The contractor can sustain a visible delay at the expense of the client while the designer error is put right and, at the same time, can partially obscure his own delay.*

This fragmented structure of the construction industry gives opportunities and threats to the construction firms. As in the above example, the contractor is taking advantage to his own benefit by delaying the discovery of the design error. However, if the designer takes a long time to rectify the error to the extent that it could greatly delay the overall completion of the project, the contractor would be losing because the overall project planning might be changed and it would affect the plant and equipment delivery and the overhead costs. Therefore, the contractor needs to develop appropriate strategies to deal with the fragmentation in the structure of the construction industry.

There is no precise nor quantitative definition of what a fragmented industry really is. Similarly, industries are fragmented due to a wide variety of reasons, and each has differing implications for companies competing in them. Porter (1980)

identifies several underlying economic causes for fragmentation. Among them, the one closest to the construction industry are (Krippaenhe 1992):

- Low overall entry barriers, which explain the proliferation of so many small firms.
- Absence of economies of scale or experience curves due to inherent characteristics of construction projects that make each one unique, and precludes large-scale standardisation or mechanisation.
- No advantages of size in dealing with buyers or suppliers as a result of the large number of suppliers and vendors, and the high degree of competitiveness among them.
- Diseconomies of scale in important aspects such as maintaining a low overhead, highly diverse product lines requiring customisation to individual users, and close local control and supervision of operations.
- Diverse market needs that promote and favour individual customised facilities as opposed to standardised ones.

Despite the managerial challenges created by fragmentation in the construction industry, fragmentation can offer significant strategic opportunities to firms that are able to overcome it. Porter (1980) identifies several approaches to overcome fragmentation that is predicated on changes that unlock the fundamental economic factors that create it. For the construction industry, the most relevant ones are (Krippaenhe 1992):

- Create economies of scale or of experience curve by introducing technological changes or innovations that enable status-quo to occur, e.g., automation of certain construction processes for increased productivity.
- Standardised diverse market needs by developing innovations, e.g., introducing design changes that dramatically lower the costs of standardised facilities, or modularisation of components that enable large-volume production at lower costs.

- Neutralise or split off aspects most responsible for fragmentation by separating those aspects from the rest of the business, e.g., decoupling the actual construction processes from the rest of the business operations of the firm.
- Make acquisitions for a critical mass, e.g., acquiring a local firm in order to penetrate a new market territory.
- Recognise industry trends early, e.g., consolidating distinct types of operations (concrete batching plant and concrete precasting plant) into a single unit as the result of new business opportunities, or regulatory changes that force status-quo by raising standards in the product beyond the reach of small firms.

3.2.3 Fluctuation in the Demand

Booms and slumps are common in all sectors of construction activity. The origins of these 'fluctuations in demand' derive from changes in the UK economy and the government's management of it. The 'stop-go' policy and the closely linked relationship of the construction industry to the overall rate of national economic growth is a problem which is shared by almost all west European countries.

Figure 3.1 demonstrates the construction output by sector for the period 1981 to 1994. It is obvious that repair and maintenance are at the top with the amount of £12000 million in 1983 and going up to around £15000 million in 1990. Due to the economic slump, in 1991 this amount dropped dramatically and then maintains the lower level throughout 1992 and forward. On the other hand, public housing is quite stable with the amount which is not more than £2000 million throughout the whole period from 1981 to 1994. It seems that this sector is not being much affected by the recession. The other sectors have quite a similar trend from 1981 to 1988 when the economic changes began affecting the construction industry. It is the output of private housing sector which first started decreasing in 1988 and this fall continued until

1991. It means that this sector has been the sector worst hit by the harsh trading conditions. The private commercial sector experienced a similar trend which began in 1990. The fall was dramatic from 1990 to 1993. The public non-housing and the private industrial sectors are quite consistent like the public housing sector and do not fluctuates heavily. Figure 3.1 indicates that the private sectors are more affected by the changes in the economic conditions. On the other hand, the public sector is more stable and the effects of the economic downturn are not very obvious.

It should be noted that the public housing and the public non-housing were more stable during the recession because of the Conservative's government policy which emphasising the private sector growth and which had already reduced the public sector spending. One of the measures taken in order to reduce the public sector spending was by reducing and compressing the public housing and the public non-housing expenditure to the minimum. Therefore, these sectors were relatively small and were not subjected to the full recessional pressure. The government had also supported the private industrial sectors (through the various Government Industrial Policies) which enabled this sector to deal less problematically with the effects of the recession.

3.3 Strategic Management Practice

Every practice rests on theory, even if the practitioners themselves are unaware of it (Drucker 1985). In many industries, it is common for the owner or manager of the firm to say that strategy is unknown in his business, and then proceed to outline clearly what his business is about and in which direction it is heading. In other words, he can present a very succinct strategy without realising it. The point is that a strategy exists for every business, however big or small, whether such a strategy is implicit or explicit (Ramsay 1989).

Hillebrandt and Cannon (1990) observed that in some of the construction companies, strategy was equated with planning and planning sometimes tended to be short-term and related to financial budgeting and forward planning. Yet when questions were asked about strategy most people were able to talk enthusiastically and cogently about it in spite of its not always being formally discussed or accepted within the firm.

These arguments (Drucker 1985; Ramsay 1989; and Hillebrandt and Cannon 1990) accept the fact that there are strategies which are being practiced in all type of businesses including construction. These strategies may be either a formally written one, as a strategic planning of a firm or simply ideas in the head of the chief executive of a firm.

According to Kaka (1990) the strategic planning in the contracting industry was generally very basic, and new developments in that area would be most favourable. In construction companies, strategic planning was considered to be primitive. It was basically conducted on two levels, the groups and the operational. The group often have informal meetings involving the chairman, finance director and corporate managers, in order to discuss where the group as a whole is going. The topics of the meetings are directed to formulate what they call implicit strategies or ultimate objectives. These usually are very broad objectives which define the shape of the group desired (such as leading quality, ultimate construction service, etc.). The strategies implemented to realise those objectives are mainly initiated at the operational level (Kaka 1990).

At the operational level, corporate planning is carried out in a more specific form but still unformalised. Each regional office conducts their own market plan

separately. They depend basically on publication and experience to assess and forecast their market. Competitors were assessed through the study of their annual accounts and publications. The results of the above processes together with the very broad objectives of the group, help contractors set strategies. The level of these strategies could be high like acquisition of companies within the regional market or low such as reducing the work force in bricklaying. However, no statement is written on these strategies and hence no commitment is held (Kaka 1990).

The above observation clearly explains the current practices of the strategic planning in the UK construction industry. Strategies are being formulated and implemented without a systematic approach and formality. It is common for a construction firm to report its achievements in a particular year in comparison with the previous year. Normally the chief executive of a firm would express his own evaluation of the firm's achievements in a judgmental way. The fact is that strategies are usually known to the chief executive himself alone who would steer the company operations. However, a few major firms do have a strategic planning committee which is responsible for the development and implementation of the firm's strategies.

3.4 Strategic Options

The following discussion of strategic options in the construction industry will be along the lines suggested by Johnson and Scholes (1993). According to them there are three related aspects which must be addressed when developing successful strategies. Firstly, the basis of the strategy, which relates to the way in which the organisation is positioning itself. This is connected to the issue of competitive advantage. Secondly, the specific directions in which the organisation could develop, such as diversification and internationalisation. Lastly, the method of development - internally, by joint-venture or through acquisition (see figure 3.2).

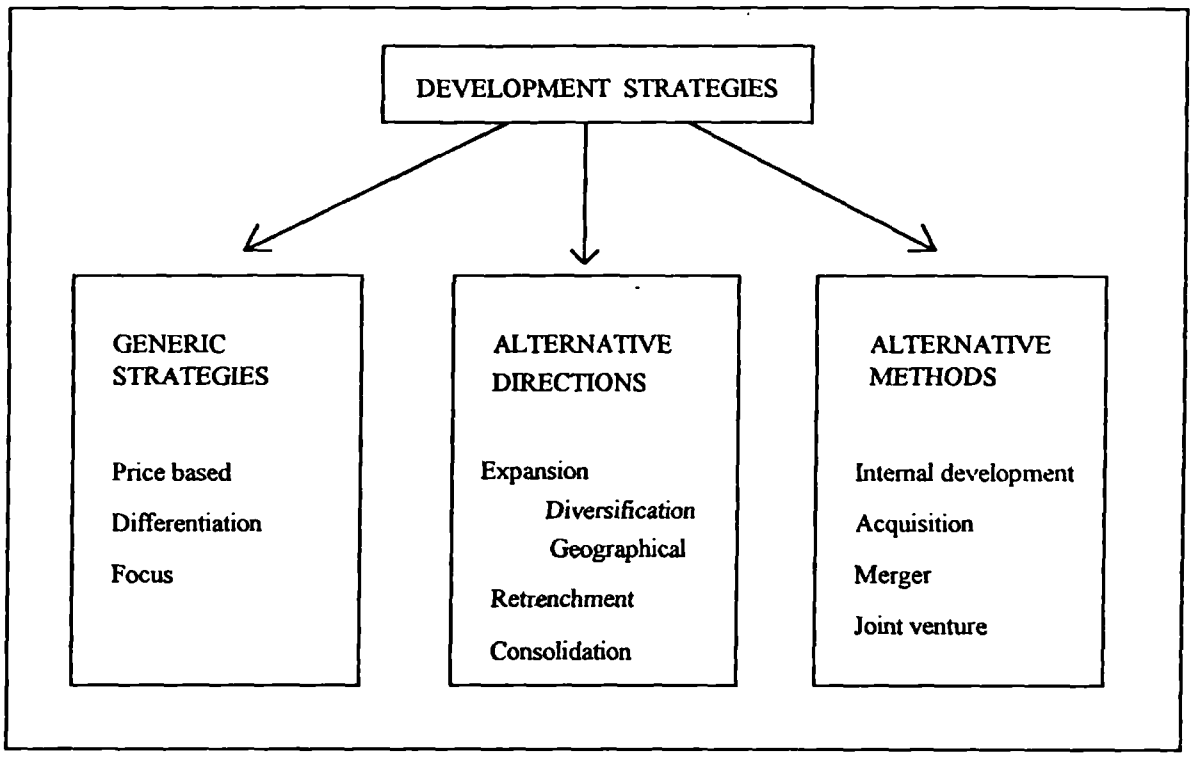

Figure 3.2 - Development Strategy for a Construction Firm.

3.4.1 Generic Strategies

There are three bases on which the construction firms could develop as shown in figure 3.3: price based, differentiation and focus. Since there is no standard product in the construction industry, the price competition takes place either at the project level or at the head office. At the corporate level, a company would reduce its fixed costs and overheads in order to be competitive. During the recent recession (1990-1993), many major construction firms followed this strategy and listed it out explicitly in their annual reports. For instance, the chairman of AMEC said that the process of restructuring and streamlining continued in all sectors of the group in 1992, aimed at reducing their cost base while maintaining the effectiveness of their client response.

Differentiation is also difficult to be implemented in the industry in which the contractor has no right to offer its own design. In the traditional contracting procedure, the competition is on price alone. However, it might be differentiated to a certain extent if the selection of contractors permits the contractor to include other services and thus to differentiate his products. There are four distinct ways of differentiating the product, some of which may be used together (Hillebrandt and Cannon 1990):

(i) by offering a range of different ways of managing the project;

(ii) by the extension of the construction phase backwards into design;

(iii) by the extension of the traditional project backwards beyond the construction phase to include putting together a financial package; and

(iv) by the forward extension to include equipping and furnishing the building, maintenance of the building or structure and the management of the facility.

Hillebrandt and Cannon (1990) noted that most contractors offer the first two, many are concerned to increase their involvement in financial packages, and several are prepared to undertake the fourth but have not yet acquired a reputation for doing so.

The third generic strategy is focus, which is related to either price based strategy or differentiation strategy. However, it is focus on the activities rather than on the products that is more applicable in the construction industry. The focus strategy has become one of the most important strategies among major construction firms in facing the recent economic slump. Odgers (1992) said that the response of management to the adverse market conditions of the last three years has been determined. Costs have been markedly reduced, general and financial management improved and peripheral businesses closed or sold so that *the emphasis is now on the core strengths of construction, housing and quarrying.* Sawdy (1991) asserts that

while pursuing their long-term plan to focus on their international Engineering & Construction and Mining strengths, they moved decisively to react to the ever-deteriorating conditions. Pountain (1992) described that significant progress has been made with the implementation of their transitional strategy to reduce debt and *to refocus Tarmac on its core activities of Quarry Products, Housing and Construction.* It is obvious that each firm has its own core businesses in which they have their strengths in terms of resources, skills or experience.

3.4.2 Directional Strategies

Three alternative directions as shown in figure 3.2 will be discussed here: expansion, retrenchment and status-quo (or consolidation).

3.4.2.1 Expansion [growth]

Firms will not be static but keep changing. Changes which they impose on their markets, and changes within companies themselves provide little option but that of growth. In a growing and changing economy, pressure from shareholders, institutions and the Stock Market may be driving many firms to grow faster than should be reasonably expected to do.

A company which is not growing is believed to be in the danger of becoming squeezed from its market place. Unfortunately, there is a lot of truth in this. The company may be taken over, it may not be able to cope with larger projects as and when the opportunities arise, and it may be too vulnerable to economic down-turns, whilst insufficiently equipped to cope with up-turns. This argument means that a company has to grow and become big to be able to survive in the cyclic economic conditions and in facing competition. Lampl (1993) argues that growth should not

come entirely from the economic upturn or boom in one country and one sector. This type of growth would be immensely depending on an economic cycle. Therefore, it is vital whilst taking full advantage of all opportunities to continue pursuing strategic growth. This can be achieved through:

- geographical spread;
- sector;
- industry diversification;
- vertical integration; and
- product mix.

Langford and Male (1991) noted that growth for contractors can be achieved in four ways:

- Efficiency only. This requires no additional resources, turnover is maintained but there is a better use of inputs to achieve efficiency. Managers are concerned therefore with managing the internal dynamics of the contracting organisation. This is a defender strategy, especially if contractors operate efficiently in niche markets.

- Growth in size only. This is a strategy of expansion where the attention of managers is directed more to the external environment in order to pursue opportunities rather than necessarily directing attention inwards to improve efficiency at the same time. This is a prospector strategy.

- Growth in size and efficiency. This requires attention to be directed firstly, outwards to the opportunities presented in the environment and secondly, internally to increase efficiency. This is an analyser strategy.

- No growth in size. A no growth or minimum growth strategy is essentially unstable. This has close similarities to the reactor strategy.

Expansion strategy is undoubtedly important for a construction firm to increase its size and consequently to enhance its capability in the eyes of its clients. Hillebrandt and Cannon (1990) report that in at least one case the advantages of large size were implicitly appreciated and spelt out quite precisely: *Size is important for three reasons - firstly, because the size of the project is large and often needs to be financed as well as actually undertaken on the building site; secondly because size gives confidence to the client in the capability of the company, and thirdly because the increase in facilities enables a spread of risk and also enables good ideas to be put into practice.*

Two important means for a construction firm to expand are through diversification either related or unrelated and through geographical spread either nationally or internationally.

(a) Diversification

Diversification is defined as the process by which firms extend the range of their business operations outside those in which they are currently engaged. This broad definition includes (Hillebrandt and Cannon 1990):

- the process referred to as backward vertical integration, that is, the acquisition or development of businesses whose products are inputs to the firm's own main operations, for instance, acquiring a concrete ready-mix company to supply concrete;
- forward integration, that is, the extension of the firm's activities to those of the normal purchase of its products, as an example, offering property management services;

- horizontal diversification, that is, a movement into other markets not involving the firm in any vertical relationships. Any of these forms of expansion may take place either by internal development or by merger or takeover.

There are five reasons for diversification by contractors into construction or non-construction activities (Hillebrandt and Cannon 1990).

- *Increased profitability.* Where the higher profit simply through more efficient use of resources seems poor, the alternatives are internal or external growth, that is, increases in the volume of contracting work in the level of activity of existing businesses, whether or not related to contracting in the construction chain, or through the acquisition of or merger with other companies, whether or not related to existing activities.

- *Increased efficiency.* One method of achieving increased efficiency is by controlling the source of supply of materials to avoid erratic or long delivery times, high prices or poor quality. When a group purchases a material company it is diversifying vertically and backward. Another form of backward vertical integration is the acquisition of subcontractors who would normally be supplying a service to the main contractor.

- *Financial efficiency.* One company mentioned that a third of its profits came from interest on cash available during the contract period and other companies indicated that interest earned was an important source of profit. Provided that the positive cash flow of contracting activities continues at a fairly even rate there is no reason why the cash should not be placed in short-term bank deposit to generate income.

- *Greater security.* It has been mentioned that one of the major disadvantages of contracting activity is that its output is subject to wide fluctuations of a cyclical nature. One way in which contractors have created a more stable situation is by securing the demand for a new product over several years by long-term contracts to purchase. Notable is coal production where contracts in the UK with the Coal Board and the electricity industry to produce certain quantities at an agreed price over a period of years give stability to the contractor's market.

- *Extraneous reasons.* There are some other reasons for a firm to diversify into the other type of activities such as market opportunities and other opportunities which have resulted from the relationship advantages, personal interests, etc.

All large contracting companies have diversified out of contracting into other types of construction activity, notably property development and housing. Many of them have decided to diversify out of construction into other activities, some still related to construction in some way but others in quite separate industries. Table 3.1 indicates some of the activities of the major UK construction firms. Most of the firms are involved in the three main activities which are building and civil engineering, house building, and property development. Quite a number of companies engaged in mining and plant hire businesses while some other companies had aggregates, other building materials and mechanical and electrical services. One firm is involved in business of builders' wholesalers. There are some other activities which are not related to construction such as time share, health care, car dealer, printing and waste disposal. Table 3.1 indicates that major construction firms were involved in a wide variety of activities which in turn make their strategic development become more complex (Hillebrandt and Cannon 1990).

(b) Geographical Spread

Most of the major construction firms in the UK have a spread of activity over the whole UK. However, only some of them have operations overseas. Hillebrandt and Cannon (1990) observed that there is a change in the work done abroad by UK construction firms. The value of the construction works done by the UK firms overseas had decreased in 1987 as compared to the value of the works in 1982/3 as shown in table 3.2. The principal reason for this change is the change in the total market situation both on the demand side and the supply side, and in contractors' competition. It was thought that the demand world-wide had fallen considerably over the past ten years. This is because of the fall in oil revenues, which had been used to finance construction projects. The second reason is because of a decline in aid from international agencies for construction projects. On the supply side there has been an increase in the capability of local contractors to carry out work. Moreover, some contractors from developing and newly industrialised countries are backed by governments whose aim is not so much to make a profit as to obtain hard currency or equipment. Thus, as a deliberate policy, foreign contractors go in to the tender with a price which is below cost. In these circumstances it is hardly surprising that margins have fallen and that UK contractors see their effective market as having fallen even more than the total world market for expatriate contractors.

3.4.2.2 Retrenchment

It is natural for a construction firm to grow in the favourable economic climates. However, in the economic down-turns, some construction firms may change their strategic direction to face the changes which are dramatic, discontinuous, and unfamiliar, as happened in the late 1960s and 1970s. There is likely to be a number of strategic options available for a construction firm to be adopted under this condition,

for example, divestment, withdrawal, and retrenchment; or expansion into new markets, either internally or through acquisition (Langford and Male 1991).

Table 3.2 - Value of construction work by British firms overseas
(£ million)

Location	1982/83	1987
European Community	24	83
Rest of Europe	80	32
Middle East in Asia	669	222
Middle East in Africa	62	55
Rest of Asia	264	179
Rest of Africa	524	205
Americas	436	672
Ocenia	255	248
All countries	2314	1696

Another option available during the slumps is for a construction firm to venture abroad which, however, needs to be pursued continuously by having a global strategy. It is very unlikely that a company has the capability to go abroad suddenly in the recession if it has no experience in overseas work before that period. Langford and Male (1991) argue that during the period of falling demand in the 1970s - a period of considerable strategic change in the industry - firms were unable to ride out the many environmental changes by having a high level of work in hand. Contracting firms were faced with three alternatives:

- To shrink - a retrenchment strategy;
- To contain the effects of the recession through their existing activities by increasing their internal efficiency and exploiting their markets more intensively - a strategy of expansion within existing market; and

- To enter new markets in terms of either project type, size or location - a diversification strategy requiring, in some instances, a redefinition of business scope.

Facing the prolong deep recession in a period of 1990 to 1993, many major construction firms had no alternatives but to shrink. With a limited number of jobs available and with narrow margins, these major companies had to reduce its capacity in order to maintain it's survival. For instance, Tarmac had reduced its capacity across all six divisions, i.e., quarry products, housing, construction, building materials, industrial products and Tarmac America.

3.4.2.3 Status-quo

Status-quo or consolidating a business means that a company would take various strategies that could maintain it's current products and markets. This is especially true for a major firm which has reached its peak and does intend to maintain it's position as a market leader. As an example, Tarmac's leading market positions in its three core activities, i.e., quarry products, housing, and construction, could be maintained by improving the utilisation of resources within this core.

3.4.3 Method Strategies

Method strategies explain how the firm's strategy can be implemented. Johnson and Scholes (1993) proposed that internal development, acquisition and merger, and joint-venture as the option for strategic modes.

In the construction industry, Hillebrandt and Cannon (1990) noted that since the accent is very much on increased profits rather than increased turnover per se, it was emphasised in a number of companies that an increase in profits did not

necessarily require a rise in turnover, but could be achieved by greater efficiency and tighter control on costs. It should be obvious, however, that these economies are available in the short term only. Where the potential for higher profits simply through more efficient use of resources seems poor, the alternatives are internal or external growth, that is, increases in the volume of contracting work or in the level of activity of existing businesses, whether or not related to contracting in the construction chain, or through the acquisition of or merger with other companies, whether or not related to existing activities. All those who were interviewed by Hillebrandt and Cannon (1990) accepted that both methods had to be pursued although it seemed that in some cases, internal growth was sought in a more planned and organised manner than was external growth where a number of companies were content to wait until suitable opportunities became known to them rather than seek them out aggressively.

The above observation was supported by Langford and Male (1991) who say that there are three means of achieving strategic development:

- Internally where the firm invests its own capital to set up and operate a new venture. This option is often the primary vehicle of growth.
- Externally through acquisition or merger. This option is often used where speed is of the essence or when a market is growing very slowly or is stagnant. The biggest problem with acquisition is the integration of the acquired with the acquiring firm or in the case of merger the successful integration of two organisational cultures to produce a new culture that represents something other than the dominance of one culture over another.
- A combination strategy which combines elements of internal and external development through contractual agreements. An example of such a strategy in the construction industry is the use of joint ventures.

3.5 Functional strategy

Functional strategy is not separated from the business and corporate strategy of a firm. In fact it is often difficult to differentiate any of them in their implementation. Functional strategy is concerned with how the different function of the enterprise - marketing, finance, manufacturing and so on - contribute to the other levels of strategy. In this section three main functional strategies of the construction firms will be discussed: research and development, marketing and advanced technology.

3.5.1 Research and Development (R&D)

McLea (1991) revealed that a government-sponsored report has concluded that the British industry is inherently incapable of supporting an internationally competitive level of long-term R&D. There is a structural failure in the UK construction industry which does not allow market forces alone to stimulate sufficient investment in future knowledge and expertise. The report claims that:

- in the UK there are only a handful of firms large enough to be able to fund in-house R&D divisions;
- the adversarial climate created by firms, each providing a narrow range of services hampers R&D;
- the industry takes a short term view of profits which regards R&D as costs rather than invesments;
- the fluctuations in the building business cycle exacerbate the industry's reluctance to invest in research and postgraduate education;
- research is not generally seen as giving a competitive edge;
- the industry has a poor image in the eyes of young people and cannot attract enough of the best graduates; and

- the industry remains practically oriented rather than inclined to theory ... [inhibiting] ... the willingness and ability of practitioners to absorb and appreciate the results of research.

In the above circumstances, the positive steps to enhance the role of R&D in the construction industry had been taken by the National Contractors Group in collaboration with the Centre for Strategic Studies in Construction at Reading University (Building Towards 2001, 1991). A special task force was formed to identify and to propose the actions needed so that the industry would be at the forefront, in terms of new ideas and products. The aim was to propose the programmes of R&D so that the industry would be able to adopt the best practice which was defined as:

> *"Best practice will have been achieved when each and every stage in the production system of design, manufacture and assembly of a component or part of a building achieves a level of productivity and quality to the standard, or better than, the best in the world."*

The task force recommended the following proposals for action:

- adopt a new structure for the industry that considers site production and productivity at every stage;
- encourage contractor-sponsored research and development;
- develop a more systematic approach to improving quality;
- improve management techniques and training;
- encourage trade groups to undertake productivity R&D; and
- incorporate productivity studies in technical and product research.

The UK construction industry has no option but to enhance its R&D as the need to keep pace with the best international standards in the design, delivery and cost of its products is essential. The competitive and economic environment, particularly with the establishment of a single European market, means that the industry must maintain its competitive position if it is to survive as a national industry.

Hasegawa, F. and The Shimizu Group FS [1988] report that the extraordinary emphasis Japanese contractors place on technology and R&D is evident in their annual reports for 1985. Corporate statements such as this are common:

> *"We are determined to ensure sustained growth of the company through the development of strategic technologies and the improvement of design and construction activities."*

Japanese contractors will continue to uphold R&D as a corner stone of their business strategy. Since R&D is a key to corporate growth, effective management policies must be formulated concerning the determination of R&D target areas, employment of engineers, and allotment of financial resources. For instance, Shimizu Corporation, spends about 10 billion yen ($67 million) per year for R&D, and will continue the same investment level in the future.

This observation indicates that R&D is one of the factors which was shaping the Japanese construction industry in its technological development and becomes competitive in the world market.

3.5.2 Marketing

Fellows (1993) noted that marketing has not been a strong feature of contractors or consultants. It was not regarded as important during booms and as an unaffordable

addition to overheads during slumps. Hillebrandt and Cannon (1990) found that contractors introduced and expanded marketing activities during the late 1970s to help combat the effects of recession. The marketing is more developed amongst larger contractors but remains less well developed than in comparable sized companies in other industries. In a study of marketing in the UK construction industry, Lim (1990) found that:

- many people and organisations equate marketing with selling;
- contractors wish to project an image of providing a high quality service;
- clients want contractors' service to be value and management based; and
- personal visits are the most effective marketing practice [promotion].

In the conclusions of his study Fellows (1993) asserts the following points.

- Changes in the construction market which were evident in the 1980s will be more rapid and extensive in the 1990s. For changes to become opportunities, contractors must be prepared to be flexible.
- Procurement methods will move towards contractor-led systems. Design and build methods will increase in use to treble in importance by 2001.
- Use of multi-stage tendering will continue to expand to accommodate increasing emphasis on contractors' past performance, prior business relationships and experience/expertise of the contractors' project team.
- Contract Price is the dominant winner or looser.
- The UK construction market will see expansion in infrastructure projects; repairs, maintenance and refurbishment will feature strongly.
- Contractors will be required to provide financial packages as part of bidding, hence, good links with banks and other institutions are vital.
- Construction will move away from transaction marketing into relationship marketing.

- All the contractors' personnel must be part-time marketers; long-term, integrated relationships are sought.

3.5.3 Advanced Technology

Fumio, H. and the Shimizu Groups FS [1988] assert that the current period is marked by phenomenal advances in technology. A rapid succession of new products has been introduced in fields such as electronics, biotechnology, new materials, and space technology. One can say without exaggeration, "they who control the technologies control the market." Accordingly, all industries are placing top priority on the development of new products, and the construction industry is no exception. However, the development of advanced technology is depending on the level of R&D activities of a firm.

3.6 Resource Strategy

The successful implementation of strategies will invariably depend upon the availability and the deployment of the firms' resources. The strategic resources of a construction firm that will be outlined here include: management; skilled workers; finance; plant; and land banks.

3.6.1 Management

Hillebrandt and Cannon (1990) found that the principal resource of construction companies is management. The deployment of management is fundamental to the efficient operation of the business. Management in contracting is particularly important because of some of the characteristics of the project and the industry:

- each project has to be set up as a production unit on a fresh site starting from nothing;

- the fact that the industry is very labour-intensive means that good man-management is vital to the success of a project;
- the production process is very complex involving a large number of inputs;
- it is uncertain, because of the weather and ground conditions as well as of the practical difficulty of guaranteeing that all supplies of materials, equipment and labour will be there on time. Thus, the number of management decisions to be taken is large and the industry at site level is very decisions-intensive;
- at the level of the operating unit, each project is different and has different clients and professionals, so management relations with outside organisations may be complex;
- because of the wide geographical dispersion of activities it is often difficult for the site manager and sometimes for the operating unit manager to obtain help or decisions from head office quickly enough. This is especially so in overseas work where the managers have to be capable of operating and taking decisions without the benefit of prior consultation.

There is another aspect of the industry which has an important bearing on the management resource and that is the dominance of the specialist professional. Whereas in other industries, generalists are more likely to fill senior management posts, in construction, senior posts are filled by heads of the production divisions who have been trained in construction management, surveying, civil engineering and related sciences.

In Japan, the types of employees sought by construction companies are rapidly changing: applied chemistry, artificial intelligence, mathematical principles, agriculture, biology, international relations, and marketing are some of the majors of university graduates employed in 1987. For the construction company to forge ahead with future strategies, strong management leadership is essential, and the recruitment

and training of employees who will work on the front line in the market is also of vital importance (Hasegawa 1988).

3.6.2 Skilled Workers

According to "Investing in Building 2001" (1989) the future skilled workers requirement depends on what happens to the industry's workload. While medium and long-term potential demand are high, if there is a short-term slowing in growth, as appears likely, firms cut back on training as they have done in previous recessions. This would have disastrous consequences for the industry's future competitiveness for two reasons:

- there is a need to improve productivity through the introduction of new skills. In a future recession competition will be more intense [more firms chasing fewer jobs]. Those firms with high productivity will be better placed to win the available work; especially when they could be in competition with firms from Japan, the USA or West Germany.

- firms that can produce high quality, reliable buildings will be able to maintain a competitive edge. But to produce such buildings entails the deployment of new techniques requiring new skills.

3.6.3 Finance

Financial policy in large construction firms is particularly interesting inasmuch as one of its main aims, unlike that of capital-intensive and hence cash-hungry firms, is to find suitable outlets for a positive cash flow which is not required within the contracting side. At the same time all large construction firms now have a diversified structure so that they undertake a range of activities, which may require the raising of

capital in one form or another in the future. The more diversified a company, the more it is likely to have raised capital for long-term investment by the issue of shares or to have to do so in future (Hillebrandt and Cannon 1990). Firms typically have two different requirements for funds, i.e., long-term; and short to medium term. Most commonly, the short period is taken as up to one year ahead, whilst medium term is between one to five years. The longer term by definition is anything over five years.

Sources of finance are critical for the firm or institution investing in fixed assets with a relatively long life, such as buildings and property. In Figure 3.3 a classification of the main longer-term sources is given. Initially, a firm will be dependent on share capital, supplemented by external sources such as bank loans, to provide investment capital. Once the firm is established and trading successfully, the internally generated funds become the most important source of investment finance. When a firm retains profits rather than distributing them as dividends to the shareholders, it is creating a valuable source of funds for new investments (Briscoe 1990).

However, when a firm wants to grow and acquire limited liability status, it will issue shares which convey an equity interest in the firm. Shares can be of several types and each conveys different rights of ownership. Ordinary shares, which normally entitle the holders to voting rights, are the most common type of share. In some companies, preference shares are issued to raise finance and these shares entitle the holder to a dividend up to a predetermined level, to be paid ahead of the ordinary shareholder. Preference shares are a safer form of investment, but the holders of such shares do not usually have voting rights (Briscoe, G., 1990).

A rights issue is where a firm offers its existing shareholders the opportunity of purchasing new shares in proportion to their existing shareholdings. Usually such shares will be offered at a price less than the prevailing market price of the company's shares, so an incentive is provided to ensure a high level of take-up. Any shares not bought by existing shareholders are sold direct on the Stock Exchange. *The rights issue offers a relatively cheap way for the public limited company to raise new finance. Rights issues are probably the most popular method of issuing new shares.*

Banks are important sources of finance for private sector firms, both in the long and the shorter time period. The UK clearing banks traditionally prefer shorter loans, although a small percentage of their loans are made for longer-term purposes. Apart from the clearing banks, there exists many other banks and financial institutions who will lend larger sums for higher-risk invesment projects (Briscoe, G., 1990).

There are many different sources available for shorter-term finance, which is required primarily to meet the firm's needs for working capital. The main sources of such finance are summarised in Figure 3.4. Most firms make use of trade credit, which enables them to buy goods and services now, without having to pay until a later date. In a similar way, firms make use of funds set aside to pay both taxes and dividends, where they hold these funds until the date for payment falls due. Factoring is another important source of short-term funding and involves raising money on the security of the firm's debts, so that cash is received earlier than if the firm waited for its debtors to pay. Most firms make extensive use of shorter-term loans, both from banks and other sources. The most common form of such loans is the bank overdraft. For firms who are part of a larger company group, there is the possibility of obtaining short-term finance through intra-company transfers (Briscoe 1990).

3.6.4 Plant

In construction, the term 'plant' is used to cover everything from very small items such as wellington boots and paint brushes, through to larger items such as excavating machines and cranes. Most firms will purchase smaller, perishable items of plant, as well as routine types of non-mechanical building plant such as scaffolding. Mechanical plant, however, which is usually distinguished by the need for some sort of power unit and the services of an operator , is much more expensive and the contractor will need to carefully evaluate whether to invest in this capital equipment.

For small firms, the decisions to acquire an item of mechanical plant means entering into a hiring or leasing agreement. The alternative option of purchasing is often ruled out because of an inability to raise the necessary finance. For larger firms, who tend to have much greater plant needs, hiring or leasing may also be the preferred mode of acquisition, despite their easier access to investment funds. The plant leasing industry grew rapidly in the period 1960-80, to the extent that about one-third of all contractors' plant was subject to some form of agreement by the early 1980s (Briscoe 1990).

Facing the cyclical economic conditions, most of the construction firms acquire their plant through hiring rather than purchasing. In this way, plant are only acquired as and when they are necessary for a particular project. By adopting this mode, construction firms can reduce the locked-up capital in the purchased plant. Hiring plant, rather than owning is probably a better strategy for construction firms which deal with fluctuation in demand of various types of projects and in different locations.

3.6.5 Land banks

Land banks means stock of land which have been given planning permission for residential development and acquired by a house builder. The future success of a house building business is critically dependent upon the ability to acquire residential building land in suitable locations at sensible prices. As an example, Prowting (1992) asserts that despite the current depressed market place, the most important asset for a house builder continues to be well located building land. The medium term ability for a house building business to grow profitably will therefore depend upon a pre-acquired stock of land, avoiding the need to buy land as required at inflated prices. It is for this reason that companies like Prowting have invested heavily in identifying and purchasing suitable land for development. As a result Prowting now holds land with planning permission, or zoned for residential use on which approximately 5400 homes can be built.

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CHAPTER 4

FINANCIAL PERFORMANCE

4.1 Introduction

Traditional economic theory assumes that the objective of business firms is to maximise profit. During the past twenty years there has been increasing criticism of this assumption. Galbraith (1983) suggests that, rather than maximise profit, firms should maximise their sales growth subject to maintaining a profit level to assure survival of enterprise. In fact, there are many theories which have been developed in relation to the viability of a firm in its environment. There are many attributes which characterise excellent companies. However, the most important and acceptable attribute is still financial performance.

This chapter describes the relationship between strategy and financial performance. It presents empirical findings by strategic management scientists which have proved over a long period of research that there are linkages between strategy and financial performance. Then, some important financial performance measurements which include ratios analyses, turnover and Z-scores are detailed.

4.2 Business Objectives

If financial performance is to be used for measuring company performance, it is necessary to understand the aims and objectives of business. Certainly, one of the objectives of a company should be to make profits. However, it should not be the only objective. The reason for this is that there a number of other factors that have long been recognised as important to the maintenance of continuous and sound company growth over a period of time. These factors are shown in the virtuous circle demonstrated in figure 4.1 (Harrison 1989).

Failure in any one of the elements of the virtuous circle can jeorpadise the natural growth and increased wealth that should occur each time we go around the circle. The aim of a company should therefore be to satisfy all the major criteria upon which success depends.

Harrison (1989) reports that the Accounting Standards Steering Committee, the management group representing the accountancy profession, questioned the top 300 companies in the UK in order to discover what their objectives were. The results of the survey were published in a booklet called The Corporate Report. The booklet included the following statement of company purpose which incorporated broadly the full spectrum of objectives observed.

Our purpose in business

Our purpose in business is to create wealth, to make money. For this to be possible, we must please our customers and enjoy the confidence of our shareholders and employees. We must make good profits, so that, after providing for taxes and dividends [and, in present circumstances, financing inflation], there is enough money available to keep our factories and equipment modern and enable us to grow in strength and maintain or improved our market position. We endeavour to provide good, satisfying employment for our people. Creating wealth and building a better company is our contribution to better standards of living.

The Corporate Report

This company statement is consistent with the virtuous circle shown in Figure 4.1. It is clear that the main purpose of business is to create wealth through good profits and various other objectives within the virtuous circle which are supporting the main purpose.

4.3 Strategy and Performance

Rue and Holland (1989) provide a summary of studies investigating the relationship of strategic management and organisational performance as shown in table 4.1. Out of eighteen studies, only four of them had little evidence to support a positive relationship whilst the overwhelming fourteen studies indicated that there are positive relationships between strategy and performance. However, most of their studies focused on manufacturing industry and there is no study that has been done on the construction industry.

Table 4.1 - Summary of studies investigating the relationship of strategic management and organisational performance

			Criteria used			
			Qualitative		Quantitative	
Studies	Types of firms studied	No. of firms studied	Evidence to support a positive relationship	Litle evidence to support a positive relationship	Evidence to support a positive relationship	Little evidence to support a positive relationship
Najjar [1966]	Small manufacturing	94	-	X	-	-
Thune & House [1967]	Varied small manufacturing	36	-	-	X	-
Henry [1966]	Unspecified manufacturing	45	X	-	-	-
Guynes [1969	Small manufacturing	160	X	-	-	-
Ansoff et.al. [1970]	Manufacturing	93	-	-	X	-
Herold [1972]	Small manufacturing	10	-	-	X	-
Rue [1973]	Manufacturing & service	386	-	-	-	X
Karger & Malik [1975]	Manufacturing	90	-	-	X	-
Malik & Karger [1975]	Manufacturing	38	-	-	X	-
Grinyer & Norburn [1975]	Manufacturing	21	-	X	-	-
Ang & Chua [1979]	Large manufacturing	113	-	-	X	-
Wood & LaForse [1979]	Bank	61	-	-	X	-
Kudla [1980]	Fortune 500	328	-	-	-	X
Sapp & Seiler [1981]	Commercial banks	302	-	-	X	-
Robinson [1982]	Varied small	101	-	-	X	-
Welch [1984]	Varied	49	-	-	X	-
Bracker & Pearson [1986]	Small dry cleaning	188	-	-	X	-

In their study of strategy and performance, Ansoff and Sullivan (1993) describe a formula for strategic success which states that the profitability of a firm is optimised when its strategic behaviour is aligned with its environment. The formula was developed over a 25-year period and has been extensively field tested. They provided a formula which was called Contingent Strategic Success Formula (CSSF) which says:

> *For optimum profitability the levels of both strategic aggressiveness and general management responsiveness of the firm must be aligned with the environmental turbulence level.*

The conclusions from their research are as follows:

- There is no single success formula which can guarantee optimum profitability to all firms.
- Instead there is a different contingent success formula for each environmental turbulence level.
- The Strategic Success Formula provides a 'conceptual umbrella' which identifies the environmental turbulence levels at which success prescriptions found in management literature become valid. Figure 4.2 demonstrates this by matching names of distinguished management scientists who offered (apparently contradictory) success formulas with turbulence levels at which the formulas become valid.
- As its name impiles, CSFF deals only with the strategic behaviour of the firm. Once the strategic behaviour (which generates a firm's profit potential in the form of new products, markets, and technologies and competitive strategies) is completed, the firm's operating behaviour must also be optimised before the firm can realised optimum profitability. *The results of the research on CSFF show that firms which succeed strategically tend to be successful operationally.*

The above conclusions were quoted to prove that there was relationship between strategy and financial performance. The conclusions were also supported by the

argument which says that there is no single best strategy. However, this research does not adopt the methodology of CSFF.

4.4 Financial Performance Measurements

There are a number of financial performance measurements that are being used frequently in analysing the performance of a firm which include ratio analysis,

turnover, and Z-scores. In terms of ratio analysis two major groups of financial ratios are described - those relating to profitability and solvency. Return on capital employed (ROCE) and return on shareholders' funds (ROSF) are the two ratios which represent the profitability of a firm. Current ratio and quick ratio are the ratios which represent the potential insolvency of a firm in a short term whilst gearing ratio is the ratio which represents the potential insolvency of a firm in a long term period. Turnover or total sales is used to measure the gross income or sales of a firm over the previous year. Z-scores are the well known system of multivariate analysis which are used to assess a company's overall health and the probability of insolvency.

4.4.1 Ratio Analysis

Ratio analysis is the systematic production of ratios from both internal and external financial reports so as to summaries key relationships and results in order to appraise financial performance. Ratio analysis as a practical means of monitoring and improving performance is greatly enhanced when (Lucey 1988):

- ratios are prepared regularly and on a consistent basis so that trends can be highlighted and the changes investigated; and
- ratios prepared for an individual firm can be compared with other firms in the same industry. This process is greatly facilitated when the firm has ready access to comparative ratios prepared in a standardised manner.

4.4.1.1 Profitability Ratios

Harrison (1989) believes that profit is obviously a key result in obsolute terms. Foster (1986) also believes that profitability is why most of us are in business. We want a better return on our money and time than we can get from bank or other lower-risk interest paying opportunities. This is one of the most commonly used methods to evaluate whether you are doing well with your business. Gill (1992) says that

profitability ratios measure and help control income. This is done through higher sales, larger margins, getting more from your expenses, and/or a combination of these methods. The primary ratios in this area are:

(a) return on capital employed (ROCE); and

(b) return on shareholders' funds (ROSF).

Capital employed represents total share capital, reserves, long term liabilities and current liabilities. Shareholders' funds represent total share capital plus reserves. Of the above two types of ratios ROCE is more appropriate for assessing the frim's efficiency in generating profitability. ROSF is more useful for relating net income to the value of shareholders' capital. Where a firm has investments unconnected with their normal trading it is usual practice to exclude these from capital employed when assessing internal efficiency. It follows that the income from such investments would be excluded from operating profits in order that the ratio analysis can concentrate upon the assessment of operating efficiency.

4.4.1.2 Solvency Ratios

Lucey (1988) noted that the analysis of solvency (or potential insolvency) can be assisted by the judicious use of ratio analysis but such analysis has certain limitations. Ratio analysis is of necessity based on normal financial reports (balance sheets, operating statements, profit and loss accounts) so that any ratios prepared relate to past conditions whereas solvency relates to the present. Conditions may have changed dramatically since the last balance sheet date and a firm which was solvent then may be currently having difficulties, perhaps because of credit facilities being withdrawn. Accordingly, any solvency ratios need to be interpreted with care and adjustments made in the light of more up-to-date information.

Gill (1992) noted that liquidity (or solvency) ratios measure the amount of cash available to cover expenses, both current and long-term. These ratios are especially important in keeping businesses alive. Not paying your bills due to a shortage of cash is the fastest way to go out of business. This argument is supported by Foster (1986) who says that liquidity refers to the ability of a firm to meet its short term financial obligations when and as they fall due.

Solvency ratios can be grouped into two categories, those relating to short term factors and those concerned with the long term ability of the firm to meet all financial liabilities including those not currently payable.

4.4.1.2.1 Short-term Solvency Ratios

Certain of the short-term solvency ratios, particularly the `current' and `quick' ratios, are considered to be of great importance in judging the financial stability of companies particularly by financial analysts, investors, bankers and creditors. Two groups of ratios have been found to be of value: those which relate current assets to current liabilities and those which indicate the rate at which short term assets such as stock and debtors are turned into cash.

Group 1 - Ratios concerned with current assets and liabilities.

$$\text{Current ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$$

$$\text{Quick ratio or acid test} = \frac{\text{Current Assets - Stocks}}{\text{Current Liabilities}}$$

Current ratio measures the ability to meet short term obligations. The generally accepted standard for the current ratio is 2:1 (Gill 1992). A company with a low current ratio may not be able to pay off bills as rapidly as it should. It may be able to take advantage of cash discounts or other favourable terms. It may not be able to keep its suppliers happy and eager to service. On the other hand, a high current ratio means that money that could be working for the business is tied up in government securities, cash savings or other safe funds.

Lucey (1988) argues that the current ratio effectively assesses the working capital of the firm. It is generally expected to be within a band of values appropriate for a given industry. It is wrong to be dogmatic about the ideal value for the current ratio but it appears that analysts consider values in the range of 1.8 to 2.1 to be acceptable.

The current ratio considers those assets and liabilities which have life cycles measured in months rather than weeks. Whilst this aspect of solvency is of great importance the immediate liquidity position, say next six or ten weeks, also needs to be considered. This is assessed by quick ratio which excludes stocks and thus concentrates attention on more liquid assets as cash and debtors. Again whilst there can be no precise norm, it appears that an acceptable range of values for the acid test ratio is between 1:1 and 0.8:1 (quick assets: current liabilities) (Lucey 1988).

Group 2 - Cash Conversion Ratios

The firm's day to day liquidity position is largely dependent upon the rate at which cash flows into the business from normal operations. These operations include the conversion of stocks into sales and therefore debtors and the subsequent rate of

conversion of debtors into cash. The two following ratios provide some guidance to the firm's ability to generate cash from normal trading.

$$\text{Average stock turnover ratio} = \frac{\text{Cost of goods sold in period}}{\text{Average stock held during the period}}$$

$$\text{Average collection period} = \frac{\text{Debtors as at balance sheet date}}{\text{Average daily credit sales during period}}$$

Whislt the average stock turnover ratio varies greatly between different industries, comparison with broadly similar companies and with previous periods of the same firm can provide useful guidance.

4.4.1.2.2 Long Term Solvency Ratios

These ratios concentrate on the longer term financial stability and structure of the firm and are generally of most interest to financial analysts and investors (Lucey 1988). A number of ratios can be calculated in this area and these include:

$$\text{(a) Gearing ratio} = \frac{\text{Fixed Interest Capital}}{\text{Fixed Interest Capital + Equity Capital}}$$

$$\text{(b) Shareholders equity to assets ratio} = \frac{\text{Shareholders equity [capital plus reserves]}}{\text{Total Assets}}$$

$$\text{(c) Non-equity claims to assets ratio} = \frac{\text{Long term debt plus current liabilities}}{\text{Total Assets}}$$

$$\text{(d) Interest coverage ratio} = \frac{\text{Profit before tax and interest}}{\text{Interest charges for period}}$$

Ratios (a), (b), and (c) are closely related and are merely facets of the same relationship. Analysts consider that too high a gearing ratio is potentially unstable, indicating as it does undue dependence on external sources for long term financing. It is important to calculate these longer term solvency factors because favourable short term ratios may disguise a worsening financial position. For example, if a firm incurs a long term liability in the form of debentures this has the effect of improving the current ratio (current assets : current liabilities) but it worsens the firm's gearing and interest coverage ratios. With fluctuating profits this could cause substantial variations in the dividends paid to shareholders which is considered by the market to be one of the signs of financial instability (Lucey 1988].

4.4.2 Turnover

This refers to the gross income or sales of an organisation over the previous year. Turnover can indicate how active the firm has been in a given period. Generally speaking, the greater the turnover the more business the firm is doing, although this is not always the case. Turnover sometimes being used as a measurement to indicate the size of a firm. By analysing the growth of the firm's turnover over a period of time it could revealed either it is growing or declining.

4.4.3 Z-Scores

Dixon (1991) argues that Z-scores are the most well known system of multivariate analysis. They are used to assess a company's overall `health' and the probability of insolvency. A number of accounting ratios are combined together to give a single index, denoting a result on a scale running from healthy through indifferent to potential failure.

The Z-score is equal to: $0.012R_1 + 0.014R_2 + 0.033R_3 + 0.006R_4 + 0.01R_5$

where:

R_1 = is working capital divided by total assets;

R_2 = is retained earnings divided by total assets;

R_3 = is earnings before interest and tax divided by total assets;

R_4 = is market value of equity divided by book value of total debt;

R_5 = is sales divided by total assets;

and;

working capital is current assets less current liabilities;

total assets is fixed assets plus all curret assets;

retained earnings is accumulated profits in the business;

market value of equity is the number of ordinary shares X their current market price + the value of preference shares;

book value of total debt is long-, medium-, and short-term debt, including overdraft;

For US companies, Altman argued that if Z is less than 1.8 they are `certain to go bust' and if it exceeds 3.0 they are `almost certain not to' (Altman 1968). Argenti (1976) suggests the appropriate UK figures are more of the order of 1.5 and 2.0 respectively.

4.5 Financial Performance in the Construction Industry

Ramsay-Dawber (1993) found that although financial indicators are used to measure corporate performance there is no standardised approach. He gives a brief review of 5 previous UK studies which have in part analysed corporate performance and reveal the extent and range of performance indicators employed by different analysts.

Firstly, an early study by Grinyer (1978) into strategy, structure, the environment and financial performance of 48 UK companies used five financial and one non-financial indicator to analyse their performance. The indicators were:

1. Average return of capital employed (ROCE);
2. Growth in ROCE;
3. Growth in profit;
4. Growth in capital employed;
5. Growth in sales; and
6. Growth in numbers employed.

Secondly, a study by Tafler (1981) suggested the use of a company's PAS (performance analysis score) when determining corporate performance. That is, the ranking and monitoring of a company's 'Z' score aginst its competitors over a given period of time.

Thirdly, a study of company performance and the effects of recession undertaken by Vernon-Harcourt (1982) used six financial and one non-financial measures to evaluate company performance:

1. Sales revenue;
2. Pre-tax profit;
3. Shareholders' funds;

4. Number of UK employees;
5. Payroll costs;
6. Total Board earnings; and
7. Best paid Directors earnings.

Fourthly, studies by Ravensbeck (1990 and 1991) produced an annual financial and operational review of the top 100 UK construction companies. All 100 companies were ranked by performance under each of the following measures:

1. Turnover;
2. Turnover growth (over a two year period);
3. Average growth in turnover (over a two year period);
4. Profit before tax;
5. Profit margin;
6. Growth in profit before tax (over a two year period);
7. Return on assets;
8. Return on shareholders' funds;
9. Debt/equity ratio; and interest cover.

Fifthly, a study by Ramsay-Dawber (1992) employed the following measurement criteria:

1. Average growth in turnover (over five years);
2. Average growth in profit (over five years);
3. Growth in return on shareholders' funds (over five years); and
4. Company's share price performance.

In their study of profitability and size of UK contractors Asenso and Fellows' (1987) used two measures of profitability, that were: (i) the pre-tax rate of return on net

assets employed; and (ii) and the return on (equity) shareholders' investment. Akintoye and Skitmore (1991) used profit percentage of turnover (POT) in their study of profitability of UK construction contractors.

In a recent study of financial performance analysis for construction industry in the United States, Kangari (1991) used the following financial ratios for developing a quantitative model: current ratio, total liabilities to net worth, total assets to revenues, revenues to net working capital, return on total assets, and return on net worth.

Hillebrandt and Cannon (1990) found that the overriding financial objective met in firms is unequivocally that of "increasing pre-tax profits." However, they all put much emphasis on the importance of cash-generation. Indeed, to several companies, cash management was a relatively recent addition to the strategy (further discussion of cash-generation in chapter 9, part 2 - discussion of hypotheses 7). Another weakness which was openly discussed in a few companies was lack of standardisation in the presentation of the results of different centres which made both interpretation and assessment by the board somewhat difficult.

As a conclusion, the previous research on the construction industry's financial performance did not follow any standardised approach in terms of the financial indicators. However, most of the studies stressed on profitability, liquidity and turnover as measures of corporate success. There are also inconsistencies in the period of analysis (from one to five years).

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CHAPTER 5

THE UK ECONOMY, THE ROLE OF THE GOVERNMENT AND THE CONSTRUCTION INDUSTRY

5.1 Introduction

This chapter aims to explain the role of the government in managing the economy and the subsequent effects upon the construction industry. It begins by describing the main features of the UK economy which includes construction. The government's role in the economy will be outlined through it's macroeconomic objectives, industrial policy, regional policy, planning and development control systems and the establishment of the Single European Market. Finally, the structure, the output and the global competitiveness of the construction industry will be described.

5.2 The UK Economy

Since 1945, the UK economy had not experienced a longer period of sustained growth than that from 1981 to 1989, which had an annual growth rate of more than 3%. Investment, export volume, the number of jobs, and productivity all rose substantially. The rate of inflation started to rise in early 1988, and attempts to contain this resulted in a downturn in economic activity.

Britain is adopting an open economy for which international trade is vital. In 1988 exports of goods and services accounted for about one-quarter of its gross domestic product. The economy is primarilay and increasingly based on private enterprise, and government policy is aimed at strongly encouraging and expanding the private sector. The private sector accounts for three-quarters of GDP and a similar proportion of total employment.

Manufacturing continues to play the vital role as the traditional engine of economic growth in Britain. However, recent decades have generally seen a faster growth in the services sector in response to rising living standards. Sevices now account for three-fifths of GDP and two-thirds of employment. Table 5.1 shows GDP by sector and the percentage of total GDP and of total employment in each sector in 1988 with, for comparison, the corresponding percentages of total GDP for 1978 (Huru 1992). Construction accounts for 6.5% of total GDP in 1988 which is slightly increased if to be compared with the figure in 1978. In terms of employment, construction accounts for 4.5 % of total employment. This statistic suggests that construction is providing more jobs than agriculture, forestry and fishing [in one group] and also energy and water supply [in another group]. Therefore, construction is one of the most important industries in the UK economy in terms of its contributions to GDP and employment.

5.3 The role of the government in the economy

The role of the government in the economy is implemented through various policies which include: macroeconomic policy; industrial policy; regional policy; planning and development control of the land use; and the involvement in the Single European Market.

5.3.1 Government macroeconomic policy

During the post war period governments have adopted four central objectives of macroeconomic policy. These are:

[a] stable prices;

[b] full employment;

[c] rising economic growth; and

[d] balanced balance of payments [BOP].

Table 5.1 - Gross Domestic Product by industry in 1988

Obviously these have been pursued with varying degrees of enthusiasm and success depending upon political objectives and unforeseen internal and external events. Throughout the past forty years there has been a 'trade-off' between objectives which has been described as the 'stop-go' cycle. Table 5.2 takes an example from the 1979 to indicate how the trade-off operates in practice.

Table 5.2 - Macro-objectives 1979-91

Year	Unemployment %	Inflation [% p.a.]	Economic growth [% p.a.]	BOP current a/c £ billion
1979	5.1	18.4	2.4	-0.5
1980	6.2	13.0	-2.5	2.8
1981	9.9	12.0	-1.4	6.7
1982	11.4	4.9	2.1	4.6
1983	12.3	5.1	3.2	3.8
1984	10.7	5.0	2.8	1.8
1985	10.9	6.0	3.6	2.8
1986	11.2	3.4	3.3	0
1987	10.3	4.2	4.6	-4.2
1988	8.3	4.9	4.9	-15.5
1989	6.4	7.8	2.5	-20.4
1990	5.8	9.4	0.6	-15.2
1991	8.7	5.8	-2.0	-5.8

Source: Government publications

In 1979 the Conservatives took over government with the central aim of reducing inflation through a tight monetary policy. The effects of this can be clearly seen with inflation falling from 18.4 % p.a. in 1979 to 5.0 % in 1984. However economic growth fell while the rate of unemployment nearly trebled - although these objectives were also influenced by the recession in the world trade in the early 1980s. It is interesting to note the large balance of payments deficits in the later 1980s (mainly the result of a domestic consumer boom not satisfied by domestic production) (CIMA 1993; Briscoe 1990).

The construction industry is particularly susceptible to stop-go problems, for the following reasons:

- products of this industry cannot be stockpiled, during the periods of cutback, as can be done in some industries;
- demand cannot be staisfied by distributing a limited number of products over the nation, due to the immobility of the product. This inevitably leads to greater problems in certain areas;
- a contractor often depends upon a few relatively large projects, a loss of only one or two contracts might lead to a dramatic reduction in turnover accompanied by cutback in staff.

There is often a time delay between the operation of government policies, and their effects upon the industry; this comes about for two reasons:

- there is a long lead time on contracts, often years, which is necessary for planning, design and tendering procedures to be completed; and
- the low level of activity at the start and finish of contracts, means that as many contracts may only just have started when the 'brake' was applied by government, then these contracts will 'blossom', and hide the problem of depression for some time.

Although the stop-go policies have been occuring for some time and will probably exist for a long time to come, they do cause the industry to be less efficient than if a steady workload could be depended upon. If some solution could be found whereby a much more even flow of work could be guaranteed, then the industry and the clients would benefit greatly (Shutt 1990).

5.3.2 Government Industrial Policy

Two industrial policies will be described which include privatisation policy and small firms policy. Both policies have certain impacts either direct or indirect upon the construction industry.

5.3.2.1 Privatisation policy

This policy was introduced by the Conservatives after the 1979 General Election and is concerned with the denationalisation of certain public sector undertakings and the tendering for work in public institutions by private companies. It is denationalisation which has prompted the greatest debate due partly to the principles involved but also the significant number of assets moving from public to private ownership.

In economic terms the aim is to improve efficiency by exposing such operations to market pressures. However, there is also a political objective related to preference for a market based rather than a government based decision making process in business. Careful regulation of the new private operations is required and proposed as a number of the industries concerned form natural monopolies (e.g. electricity, gas, and airports). In these circumstances there is little possibility of establishing a competitive environment on the lines of perfect competition because the nature of production and the number of firms will not permit. At best there will be competition between oligopolists, at worst they will collude and behave as monopolists.

The aim of government is to carry out the denationalisation programme as rapidly as the stock market will permit. The objective is to dispose of up to £13 billion of public assets over a six year period 1984-90 in addition to previous sales. This represents an ambitious programme and its success depends upon the state of the

economy and the ability of the stock market and institutional investors to accommodate such significant floatations. In October 1987 the sales of BP shares had to be taken up by underwriters due to lack of private investment resulting from the fall in the stock market. Table 5.3 gives examples of issues and amounts raised.

The privatisation programme would affected the construction industry in many ways. The most obvious change that would take place immediately is the procurement systems, i.e., from governmental procedure to that of private practices. The construction firms need to make wide adjustment with new clients which could be more demanding in order to maximise its profitability. There would be more new jobs for contractors in the improvement and upgrading programme of the existing facilities by these giant companies to provide better services to their customers (CIMA 1993).

(b) Small firms policy

Since 1979 a wide range of measures to encourage the development of small firms has been introduced. The main sources of government finance and assistance for small firms are as follows:

[i] *Business Expansion Scheme*

This was introduced in 1983 and was the successor to the Business Start Up Scheme of 1981. Under the B.E.S. investors in both established and new unquoted companies are offered relief against income tax on up to £40,000 invested in any single year.

[ii] *Enterprise Allowance Scheme*

This is designed to help unemployed start up in business. The main requirements are that the borrower must have £1,000 of his own to invest in

the first year in order to receive the allowance of £40 per week. Each year there are about 100,000 entrants to the scheme.

[iii] *Enterprise Initiative*

This is designed to provide small firms with a wide range of consultancy services at low cost. These relate particularly to marketing, finance and longer term planning.

Together these measures provide significant support to small firms in certain cases. However, it should be noted that the thousands of small firms in existence only provide a few percent of total jobs and that for every 100 new firms commencing business now only five will be left in ten years' time (CIMA 1993). This is especially true within the construction industry where there are more than 150,000 small firms which employ less than eight persons. The small firms in the construction industry usually involve in the repair and maintenance sector which does not require a big capital or highly specialised skills.

5.2.3 Regional Policy

The signs of a regional imbalance between the South and the North were unmistakable by the late 1950s although the problem had been recognised much earlier. The main indicator is the unemployment rate as indicated in table 5.4.

The development of regional policies has occured since the inter-war period and is reflected in a wide range of Acts and policies. However, significant changes have been made to regional policy in the 1980s and it is at this point that analysis should be concentrated. Since 1984 regional policy has been reviewed twice with the overall aim of targeting expenditure more effectively and relating regional aid to specific cases where there is clear advantage to be dirived. In 1984 the assisted areas were redefined as shown in Figure 5.1, with the establishment of development and

intermediate areas. The main difference between these types of area was that the former received grants automatically while the later did not.

Table 5.4 - Regional Unemployment Rates

Region	1961	1980	1989	1991
North	2.5	11.4	9.9	10.7
Yorks and Humberside	1.0	8.3	7.4	9.2
East Midlands	1.0	7.0	5.4	8.3
East Anglia	1.0	5.9	3.6	6.7
South East	1.0	5.0	3.9	8.1
South West	1.4	6.9	4.5	8.4
West Midlands	1.4	8.4	6.6	9.6
North West	1.6	10.0	8.5	10.1
Wales	2.6	10.8	7.3	9.4
Scotland	3.1	10.5	9.3	9.2
N. Ireland	7.5	14.7	14.6	14.2
U.K.	1.6	7.0	6.3	9.0

Source: Annual Abstract of Statistics and Employment Gazette

In 1988 further changes were announced as the result of a six-month review of industrial policy by the Department of Trade and Industry. This can be summarised as follows:

- regional development grants were abolished from March 1988, under the assumption that most projects involving such grants would have gone ahead despite the availability of funds;
- selective grants were retained to be allocated to projects where it could be justified that no development would occur without some public financial support;

Figure 5.1 - Map of the Assisted Areas

- selective grants were extended to include inner city areas, previously not covered;
- firms located in eligible areas employing less than 500 people were to recieve two-thirds of the cost of private consultancy. Firms in non-qualifying areas wei to recieve half of the cost; and
- firms employing less than 25 people in development areas were to qualify for investment grantsof 15% toward the cost of fixed assets (to a limit of £15,000) and innovation grants of 50% to support product and process development to a limit of £25,000.

The overall aim of these policy changes was to encourage management initiative and enterprise in the development areas, with the intention that economic growth in such regions would be self-generating (CIMA 1993). The effects of the regional policy upon contractors is quite obvious. The areas which have been identified as the assisted areas are creating demand for the contractors' public works sector. As a consequence of the development projects in these areas, the housing demands would also increase and give the opportunities for the housing developer to make the investments in the speculative housing sector.

5.3.4 Planning and Development

All parts of the United Kingdom have their own planning systems. These differ in many ways but are based upon the same fundamental priciples. The Department of Environment (DoE) is responsible for land use planning and development in England. Figure 5.2 shows the structure of government for planning administration. The British government is trying to create favourable operating conditions for the markets and to encourage entrepreneurship. It aims to produce regulations that cause a minimal amount of restriction while protecting the public interest, for instance, as regards health and safety. The role of the planning system today is to encourage

development and, at the same time, to conserve the urban environment and protect the countryside.

5.3.4.1 Structure Plans

Every county planning authority is required to prepare a structure plan and to keep it under review. Structure plans now cover the whole country. The aims of the structure plan are:

- to define policies and general proposals for the use of land; and
- to provide a framework for local plans.

The structure plan comprises a written statement of policies illustrated by the key diagram. The areas included in the structure plan subject to strong development activity are call 'action areas'.

5.3.4.2 Local Plans

Local plans do not, as of yet, cover all areas, but only 'action areas' under heavy development pressure or areas subject to strict constraints such as the green belt. Local plans cover about a quarter of the land area of England. They consist of a map and details in writing. Local plans have four official functions:

- to carry forward in more detail structure plan policies and general proposals;
- to provide a framework for development control;
- to coordinate proposals for the use of land; and
- to bring detailed planning issues before the public.

The planning authorities use these development plans as a basis in approving planning permission applications. The construction firms which include housing and property developers should investigate these plans carefully in order to find out what types of

projects can be implemented in an area before purchasing a site or proceeding with design work.

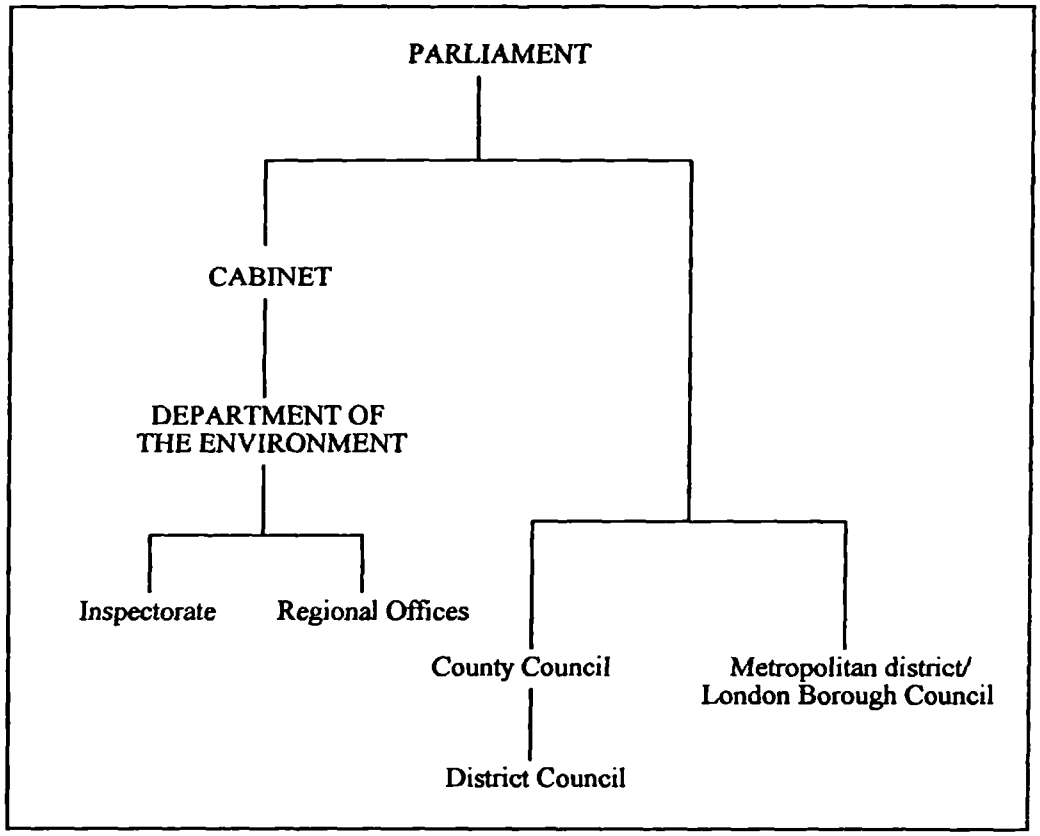


Figure 5.2 - Structure of government for planning administration.

Laws are enacted by Parliament. The Department of the Environment is responsible for national-level matters. Local government is responsible for the preparation and implementation of development plans and development control. Responsibility is further delegated to County and District Councils and in London, since 1986, to the London Borough Councils.

Source: Department of the Environment

5.3.5 Single European Market

The European Community consists of twelve Member States: Belgium, Denmark, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain and the United Kingdom. Before unification of Germany in October 1990 the population of the Community stood at 324 million, and its Gross Domestic Product

made it the largest market in the world (see table 5.5). The Single European Market which was formed in 1992 has three main objectives (Chapman and Grandjean 1991):

(a) The creation of a single market through the removal of physical, technical and fiscal barriers. With over 320 million inhabitants it would have a purchasing capacity larger than any other single market in the world;

Table 5.5 - Data on European Community Member States

(b) To ensure the technical vitality of the market through programmes promoting advanced technology such as ESPIRIT (the acronym of a programme concerned

with research and development of information technology), RACE (telecommunication), BRITE (Basic Research in Industrial Technologies). Related to this was the objective of the removal of barriers to trade caused by differing, or weak 'intellectual property rights', i.e. patents, trademarks and copyright; and

(c) To enhance economic flexibility by eliminating barriers to the movement of people, goods, services and capital. Enhanced scale of production and specialisation would enhance competitiveness. Associated with this would be the control of anti-competitive behaviour by interprises. Also, Member States would be prevented from unfairly protecting national companies and supporting unfair competition by subsidies or other forms of support.

5.3.5.1 Industry Response

The European construction market remains fragmented. Attempts to bring harmonisation will be slow and may be barely noticed by the smaller companies. The larger companies are gathering resources and expertise in preparation for more demanding and sophisticated projects for larger and more international clients. The largest European companies with construction interests have been building up their positions in the European market. Companies such as SAE of France, Philip Holzmann of Germany, AMEC of the UK, Dragados y Construcciones of Spain, appear to have well formulated strategies in operation. As well as building up positions in the internal market, these large companies are starting to compete in Eastern European markets and further afield aginst the Japanese and US majors, some of which are very large. Surprisingly, even the large companies find difficulty in keeping abreast of new initiatives and legislation emanating from Brussels and tend to

rely on consultants to keep them informed on relevant developments (Chapman and Grandjean 1991].

5.4 The Construction Industry

5.4.1 Structure

Both private contractors and authorities are engaged in construction work each with their own employees. In 1988 private firms carried out over 90 % of the works. The British contracting industry consists of a small number of very large companies and a very large number of small companies employing a few people. The impact of mid-sized companies is insignificant in Britain. The construction industry consists of more than 170,000 firms of which about 155,000 employ less than eight persons. Although the number of firms employing over 600 workers is only about 100, they produce nearly 20 % of all construction (Huru 1992., Hillebrandt and Cannon 1990).

A feature of small firms is their focus; especially in repair and maintenance. Large firms concentrate more on new work and the 100 largest produce nearly a third of all new work, whereas their share of repair and maintenance is less than 10 %. Contractors are following two different strategies in their operations. Subcontracting and specialist contracting have increased as has the number of firms engaged in these activities. Large contractors that used to be main contractors have cut their direct, permanent workforce and shifted from building contracting proper to managing projects. Large contractors have also become involved in speculative development, where they establish that the client needs a building, arrange financing and a site, manage construction and even see to running and maintenance. Since contracting and development activities are quite dissimilar, firms engaged in both have separate units for each activity (Huru 1992).

Table 5.6 displays the turnover and the profit margin of the top 20 UK contractors. Half of the number have more than £1,000 million turnover whereas the other half have between £200 and £1,000 million turnover. The profit margin ranges from 1.8 % to 19.3 % in 1988. Most of the firms' turnovers were growing but the profit started to fall in 1989 which indicated the beginning of the effects of economic downturn upon the industry.

5.4.2 Output

The output of the construction industry between 1981 to 1991 and the forecast for the period of 1992-1994 is shown in table 5.7. It can be seen that the total of all work had been continuously growing for nearly a decade from 1982 to 1990. This steady growth for a long period indicates the strong relationship between the output of the construction industry and the general economic conditions. It was mentioned at the beginning of this chapter that starting in 1981 the British economy probably experienced the longest period of sustained growth since 1945, at an annual rate of over 3%. However, as a result of the economic change in 1989, the total of all construction works declined in 1991 and this trend continued till 1993.

Figure 5.3 demonstrate the construction output of 1981 and 1991 respectively by sector. The total amount of work in 1981 was £25,141 million while in 1991 this amount increased to £31,884 million. In terms of sector, except for private commercial which had increased from 10.83% in 1981 to 20.06% in 1991, the other sectors had no significance change.

Table 5.6 - The Top 20 UK Contractors

	Turnover £M		Profit margins %	
	1989	1988	1989	1988
Tarmac	3527.0	2830.0	10.7	13.9
Trafalgar House	2563.5	2083.3	9.1	9.9
Wimpey	2008.0	1694.0	6.7	8.5
AMEC	1992.6	1309.9	4.6	4.7
Beazer	1969.8	1343.3	7.2	8.5
P&O [Bovis]	1665.2	1191.9	12.6	17.3
Balfour Beatty	1610.0	1359.9	2.9	3.8
Costain	1404.2	1150.9	3.9	7.8
John Laing	1363.2	1356.2	4.2	5.0
Taylor Woodrow	1321.1	1260.1	8.8	8.2
Mowlem	1305.0	991.0	1.7	6.0
Alfred McAlpine	663.3	591.0	3.5	3.5
Barrat Developments	586.5	529.5	13.2	11.6
Newarthill	533.3	415.8	4.2	3.9
Higgs & Hill	419.1	342.8	6.6	7.3
YJ Lovell	390.8	382.7	8.5	6.4
Crest Nicholson	349.5	268.3	10.6	13.6
Norwest Holst	339.0	294.0	2.5	1.8
RM Douglas	326.7	261.7	3.8	3.4
Bryant Group	314.8	259.7	16.3	19.3

Table 5.7 - Construction Output

£ million 1985 prices
(percentage annual changes)

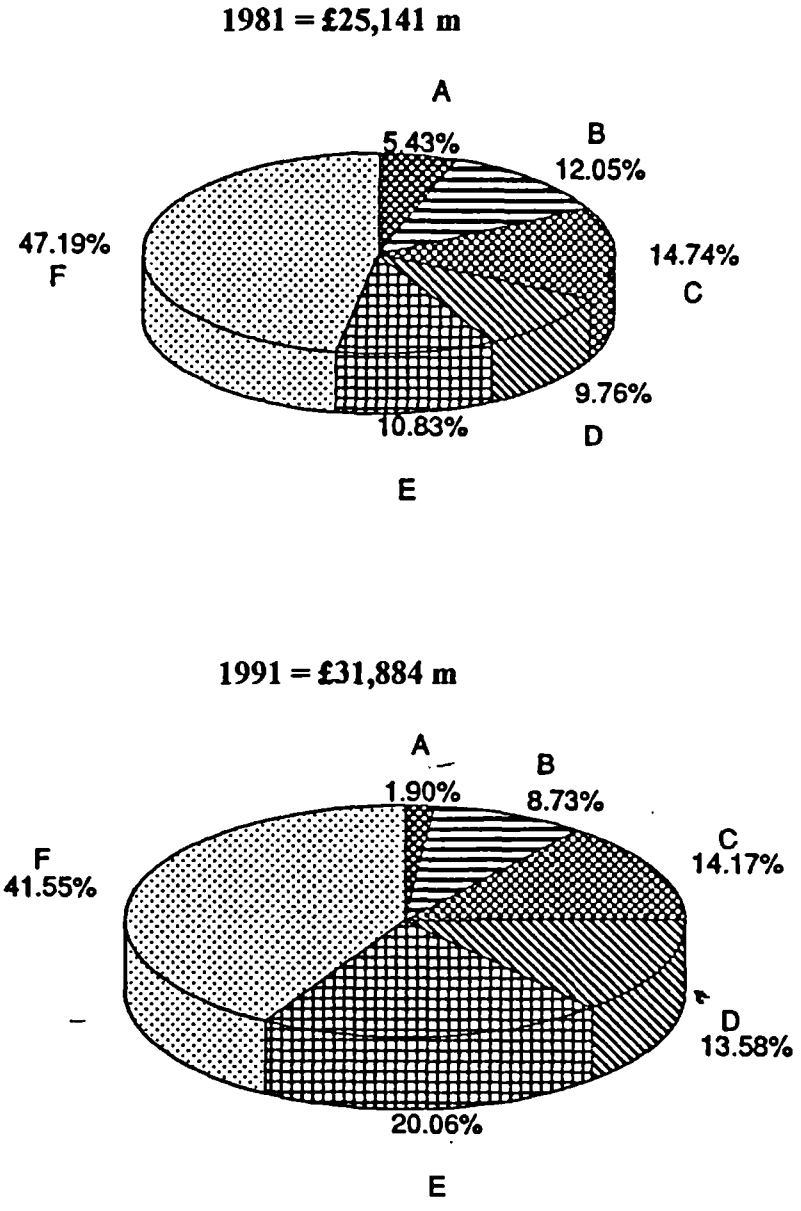
	ACTUAL											FORECAST		
	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Housing:														
Public	1366	1140	1210	1107	918	815	868	789	754	703	607	755	840	880
	(-34)	*(-16.5)*	*(6)*	*(-8.5)*	*(-17)*	*(-11)*	*(6.5)*	*(-9)*	*(-4.5)*	*(-6.5)*	*(-13.5)*	*(24.5)*	*(11)*	*(5)*
Private	3029	3482	4174	4036	3848	4294	4771	5312	4319	3371	2784	2910	3260	3815
	(-9)	*(15)*	*(20)*	*(-3.5)*	*(-4.5)*	*(11.5)*	*(11)*	*(11.5)*	*(-18.5)*	*(-22)*	*(-17.5)*	*(4.5)*	*(12)*	*(17)*
Other:														
Public	3706	3866	3943	4002	3786	3802	3603	3639	3832	4252	4517	4560	4560	4470
	(-5)	*(4.5)*	*(2)*	*(1.5)*	*(-5.5)*	*(0.5)*	*(-5)*	*(1)*	*(5.5)*	*(11)*	*(6)*	*(1)*	*(nc)*	*(-2)*
Private Industrial	2453	2202	1981	2443	2848	2610	3021	3463	3828	4013	4331	4170	4015	4115
	(-16.5)	*(-10)*	*(-10)*	*(23.5)*	*(16.5)*	*(-8.5)*	*(15.5)*	*(14.5)*	*(10.5)*	*(5)*	*(8)*	*(-3.5)*	*(-3.5)*	*(2.5)*
Private Commercial	2724	3097	3169	3316	3520	3984	4707	5395	6818	7590	6397	4800	4320	4190
	(7)	*(13.5)*	*(2.5)*	*(4.5)*	*(6)*	*(13)*	*(18)*	*(14.5)*	*(26.5)*	*(11.5)*	*(-15.5)*	*(-25)*	*(-10)*	*(-3)*
TOTAL NEW WORK	13278	13787	14477	14904	14920	15505	16970	18598	19551	19928	18635	17195	16995	17470
	(-10.5)	*(4)*	*(5)*	*(3)*	*(nc)*	*(4)*	*(9.5)*	*(9.5)*	*(5)*	*(2)*	*(-6.5)*	*(-7.5)*	*(-1)*	*(3)*
Repair and Maintenance	11853	11683	12170	12633	12930	13252	14052	14670	15133	15088	13249	12695	12755	13125
	(-9)	*(-1.5)*	*(4)*	*(4)*	*(2.5)*	*(2.5)*	*(6)*	*(4.5)*	*(3)*	*(-0.5)*	*(-12)*	*(-4)*	*(0.5)*	*(3)*
TOTAL ALL WORK	25131	25470	26647	27537	27850	28757	31022	33268	34684	35016	31884	29890	29750	30595
	(-9.5)	*(1.5)*	*(4.5)*	*(3.5)*	*(1)*	*(3)*	*(8)*	*(7)*	*(4)*	*(1)*	*(-9)*	*(-6.5)*	*(-0.5)*	*(3)*

NB On all tables of construction output, forecast figures have been rounded to the nearest £5 million.

Source: NEDO 1992

Figure 5.3 - Construction Output 1981 and 1991

(£ million at constant 1985 prices)



A Public Housing
B Private Housing
C Public Non-Housing
D Private Industrial
E Private Commercial
F Repair and Maintenance

Source: NEDO 1992

5.4.3 Global Competitiveness

Biggam (1989) noted that to understand the present situation we need to look at the recent history of the UK construction industry. Almost without exception, all the UK majors made a lot of money in the Middle East; for example Costain have said that 75% of their profits in 1980 came from the Middle East. Fortunately as that particular bubble burst the Thatcher years brought with them significant growth in commercial developments and property, largely in the south east, while housebuilding throughout the UK enjoyed an unprecedented boom. Profits were more easily earned in these areas and many of our largest construction groups with almost indecent haste moved rapidly away from civil engineering to the easier pickings of property and housing - to such an extent that many of our major construction groups are now regarded and rated as housebuilders and property developers (Biggam 1989). In fact, this was influenced by the government policy which strongly encouraging the growth of the private sector and at the same time, reducing the public sector spending (refer "Section 5.3.2 - Government Industrial Policy").

So, with some notable exceptions, *the UK construction industry is not well equipped to meet the changes in the UK markets for the 90s.* ***Equally, therefore, it is ill equipped to meet the increasing Japanese challenge in both domestic and international markets.*** Although superficially our profitability, bolstered by property and housebuilding, may look strong aginst our continental European competitors, our skills are not - witness the arrival of French contractors in UK infrastructure projects - although this is also influenced by their longer term approach to investment (Biggam 1989).

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CHAPTER 6

RESEARCH DESIGN AND METHODOLOGY

1.0 Introduction

This chapter describes the research design and methodology which have been used to perform this study. The research work was divided into two phases in order to achieve the objectives that had been set out at the beginning of the work. The first phase aimed to reveal the relationship between firms' competitive strategies and their financial performance in the construction industry. In the second phase, a further investigation was carried out to identify the appropriate construction firms' strategies in three different economic conditions that were boom period (1986-1989), recession period (1990-1993) and future (1994-onward). It should be noted that in order to get the reliable and appropriate information required, all correspondence was directed to the chief executive officer of the construction companies contacted.

6.2 Methodology

6.2.1 Phase 1 - Relationship Between Firms' Competitive Strategies and Their Financial Performance

Sampling

This study was carried out within the UK construction industry. The question of how many construction firms would be included in the sample was resolved by deciding to contact all of the 120 construction public limited companies which were listed in the "Britain's Top 500 Construction Companies" published by Jordan & Sons Limited (1989). Initially these companies were requested to provide their annual reports from the year 1986 to 1992. This exercise was necessary in order to gather important information that was required in developing the questionnaires which were required in Phase 1 and Phase 2 of this study. This information would also be used in the analysis of data and in the discussion of findings at the later stage of the investigation.

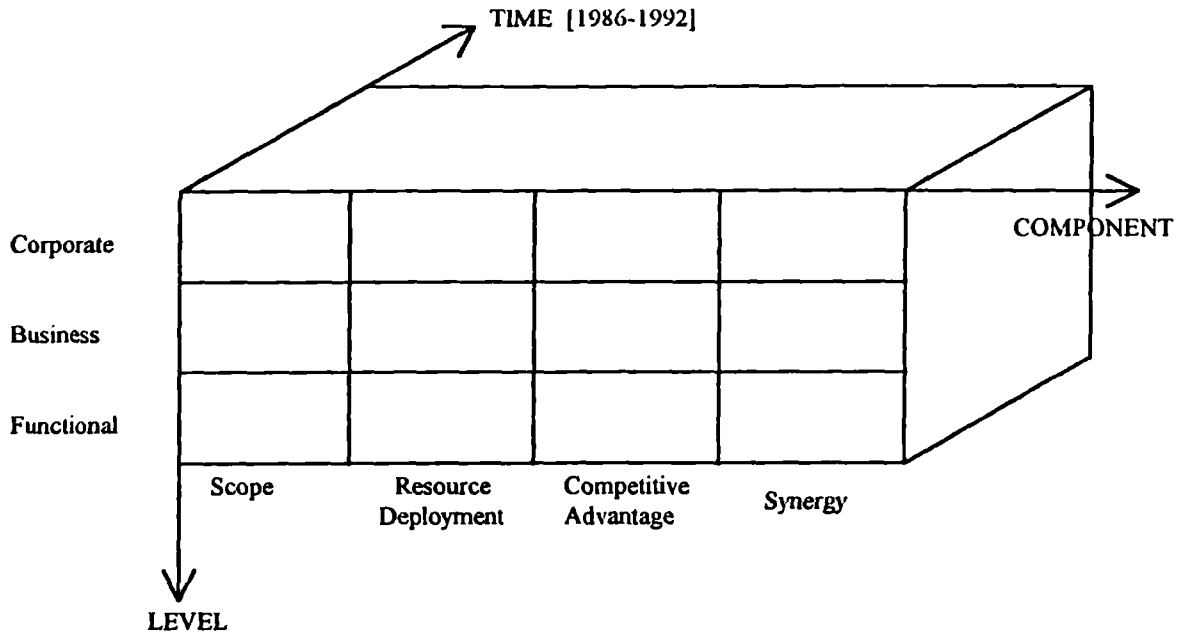

Figure 6.1 - The Strategic Space

Step 1 - Chosen Time Period

The first element in the strategic space which had to be decided was the time period (see Figure 6.1). The relevant time period to be studied was decided to be from 1986 to 1992. This period was chosen mainly due to the availability of data and also the suitability of data to be used as a basis for future strategic development. During this period, the construction industry had experienced two different economic conditions. From 1986 to 1989, it was considered as a period of economic boom. It was at this time that the construction industry had expanded and achieved a good financial performance. On the other hand, from 1990 to 1992, the economic conditions turned into a deep recession that hit the construction industry severely. Most of the construction firms, regardless of their size incurred heavy losses and some of them eventually went into liquidation. As examples, table 6.1 and table 6.2 present quotations of the chairmans' statements of two major construction firms which were Tarmac plc and John Laing plc for the period of 1986 to 1992. Tarmac considered

that the economic down-turn had started in 1989 whilst John Laing regarded that 1989 as a year of continued success. The reason for these two perceptions was due to the differences in their business portfolios. Tarmac had a large division of housing with many construction related businesses but John Laing had contracting activity as its main business.

Step 2 - Chosen Level and Components

The next two elements in the strategic space which had to be considered were the level of organisational strategy and the components of strategic decisions (see figure 6.1). Considering the availability of data, it was decided that the study would focus on the corporate level. It was at the corporate level that the question of "how to compete in a particular industry, product or market segment" will be addressed. In this context, the study would be directed to the parent companies which normally have a central board of directors which were responsible for the firms and their subsidiaries' strategic decisions.

Cool and Schendel (1987) argue that scope and resource deployment reflect major strategic decisions, whereas competitive advantage and synergy represent the results of scope and resource deployment decisions taken by the firm. In the construction industry, the scope might be represented by the size, the type of activities and the geographical coverage. A board of directors would make decisions on whether a firm would venture into any type of activity or not. As far as resource deployment was concerned, Hillebrandt and Cannon (1990) argued that the construction industry regards a firm's management team as the principal resource. The deployment of management is fundamental to the efficient operation of the business and is largely dictated by decisions on scope. However, it does not mean that the other resources such as finance, plant, material and land were not important.

Table 6.1 -- The Chairman's Statements of John Laing plc

YEAR	QUOTATIONS
1986	"1986 has been another record year for the group with turnover increased to 3878 million and pre-tax profit to £38.1 million."
1987	"I am delighted to say that 1987 was a highly successful year for the group. While the general business climate remains buoyant, it is difficult to envisage any change in the highly competitive nature of the construction sector."
1988	"1988 was a good year. While 1989 starts with uncertainty about the impact of the chancellor's measures and over the will of the new US administration to tackle its deficits, I am convinced that Laing has both the assets and the people to meet any challenge we may encounter."
1989	"The Laing Group has enjoyed another year of considerable success. While not being a record-breaking year, 1989 has been one of continued success."
1990	"Most parts of the group suffered from adverse trading condition throughout 1990. The reasons for this situation are well known: sustained high interest rates leading to a recession, coupled with a volatile international scene and general lack of confidence."
1991	"In my statement last year, I indicated that 1990 had been a hard year and that 1991 was going to be equally so. Since that statement the recession in the UK and the American companies has not only been deeper than was expected but has also gone on much longer than was expected."
1992	"The recession continued through 1992 and conditions deteriorated further as the year progressed."

Table 6.2 - The Chairman's Statements of Tarmac plc

YEAR	QUOTATIONS
1986	"We could foresee not only a reasonable level of demand and favourable trading conditions in most of the sectors, but we felt that with numerous recent acquisitions. The year, which has been a very good one ..."
1987	"The UK economy where over 80 % of our turnover still lies, has had a strong and steady year and the group's team of UK businesses has responded effectively and enthusiastically."
1988	"Once again the UK with its healthy economy and high industrial and commercial activity provided favourable trading conditions ..."
1989	"1989 was a year of mixed fortunes for your company, in which the recent strong tide in the UK construction industry continued to run for many sectors whilst some, particularly private housing, suffered comparative disappointment, particularly in the last quarter."
1990	"The UK construction industry endured an even more difficult year in 1990 than was predicted in my statement last year. The country's descent into the worst economic conditions for a decade was, in the event, both sharper and deeper than anyone foresaw."
1991	"The depression in the UK economy is now revealed not as a relatively serious cyclical downturn but as an extreme condition, not previously experienced in the markets which we serve."
1992	"The depressed trading conditions of the last four years continued ..."

Strong financial back-up was crucial in the time of recession when the number of jobs decreased significantly and there was not enough cash to sustain the firm's overheads. In this study, gearing was used as an indicator of a firm resource deployment as it reflected the capability of a firm in securing resources which were needed for the completion of its projects. A firm with a low level of gearing might have bigger capital and not be subjected to heavy borrowing. This was particularly important in the period of recession when a firm was in need of cash from borrowing (if the issue of shares was not possible) to maintain the firm's overhead cost. However, in a booming economic situation a highly geared firm could achieve a good financial performance as the profit margin would be higher than the interest rate for the borrowing.

Step 3 - Identify Firm's Competitive Strategic Decisions Variables

The third step which was more critical involved identifying the variables which best capture the firm's scope and resource deployment. These variables were identified by examining construction firm's annual reports, construction industry studies, text books and recent journals on the construction industry.

The strategic variables, as indicated in Step 2, would be represented by a firm's size, its type of activities and its geographical coverage. A firm's size was measured by its turnover. Types of activities which was extracted from various sources were as follows:

Building and civil engineering contracts;

Housing;

Property;

Quarrying;

Building materials;

Industrial products;

Plant hire and sales;

Mechanical & electrical engineering services;

Builders merchants;

Shipping;

Hotels;

General Services (e.g. exhibition centre, catering, vending equipment, etc); and

Other activities.

In terms of geographical coverage, it was decided that the following strategic variables would be used:

Within the UK (National) and

Outside the UK (International).

Level of gearing (as a percentage) was used as an indicator of a firm's resource deployment.

Identifying Financial Performance Variables

Ramsay-Dawber (1993) noted that although financial indicators are used to measure corporate performance there is no standardised approach. An early study by Grinyer (1978) into strategy, structure, the environment and the financial performance of forty-eight UK companies used five financial indicators to analyse their performance over a four year period. The indicators were average return on capital employed (ROCE), growth in profit, growth in capital employed, growth in sales, and growth in numbers employed. The measure criteria employed by Ramsay-Dawbar (1992) in a study of the organisational form and culture of successful UK companies was average in growth in turnover, average growth in profit, growth in return on shareholders' funds and company's share price performance.

Hillebrandt and Cannon (1990) observed that in the construction industry emphasis is very much on increased profits rather than turnover per se. It was emphasised in a number of companies that an increase in profit did not necessarily require a rise in turnover, but could be achieved by greater efficiency and tighter cost control on costs.

It is a fact that at the end of the day, liquidity and proftability will be the same, but their timing is greatly different (Schlosser 1992). Cash and profit differ only when contract, project or company generates cash and profit are evaluated on a periodic basis. However, many firms which have profitable projects but end up bankrupt because of the shortage of cash which is needed in completing such projects. Liquidity refers to the ability of a firm to meet its short-term financial obligations when and as they fall due. Foster (1986) noted that one of the indicators of the likelihood of financial distress is a cash flow or liquidity crisis.

Other than profitability and liquidity, turnover is regarded as an important performance measurement for a construction firm. Turnover represents size of a firm which reflects how active is a firm in its business sector. Hillebrandt and Cannon (1990) report that the advantages of large size were implicitly appreciated in many discussions and in at least one case spelt out precisely: size is important for three reasons - first, because the size of project is large and often needs to be financed as well as actually undertaken on the building site, secondly because size gives confidence to the client in the capability of the company and thirdly, because the increase in facilities enables a spread of risk and also enables good ideas to be put into practice.

The financial performance variables which were chosen to be used in this study were selected on the basis of their importance for the survival of the

construction firms and the availability of the data. Two variables were chosen to represent profitability which was return on capital employed (ROCE) and return on shareholders' funds (ROSF). Two other variables were included to represent the liquidity which was current ratio and quick ratio. The final variable was turnover which was representing the size of a firm.

As a summary the following financial performance variables would be used in this study:

- ROCE;
- ROSF;
- Current Ratio;
- Quick Ratio; and
- Turnover.

Formula used for the calculation of the ratios

ROCE (expressed as a %) = pre-tax profit / net assets (fixed + current assets - current liabilities)

ROSF (expressed as a %) = pre-tax profit / shareholders funds

Current ratio = current assets / current liabilities

Quick ratio = (current assets - stocks) / current ratio

Investigate Correlation Between Firms' Competitive Strategies and Their Financial Performance

The correlation coefficients between firms' competitive strategy variables (CSV) and financial performance variables (FPV) would be culculated by using the Pearson product-moment correlation formulae. Frude (1993) explained that this procedure will tell us the degree to which pairs of variables are correlated. A positive

correlation means that high values of a CSV tend to be associated with high values of a FPV and that low values of CSV tend to be associated with low values of FPV. A negative correlation means that high values of CSV tend to be associated with low values of FPV and that low values of CSV tend to be associated with high values of FPV. This analysis would be performed by using SPSS for Microsoft Windows Release 5.0 (SPSS for Windows™ Release 5.0).

The value of a correlation is represented by the correlation coefficient. Negative correlation range from -1 to 0, [e.g., -0.93 is a strong negative association, and -0.14 is a weak negative association]. Positive correlation range from 0 to +1 [e.g., 0.89 represents a strong positive correlation, and 0.07 represents a very weak positive correlation].

Correlation also displays the significance of each correlation coefficient calculated. It assumes that the user has hypothesised either a positive or negative association and therefore normally displays the one tailed probability of the correlation. If a directional hypothesis has not been made, the significance of the two tailed probability can be requested. A single asterisk [*] indicates a one-tailed probability of less than 0.01. This means that a correlation of this level [or greater] would occur by chance less than one in every 100 analyses. A double asterisk [**] indicates a one tailed probability of less than 0.001. This means that a correlation of this level [or greater] would occur by chance less than one in every 1000 analyses.

The correlation procedure will be used to calculate the possible association between competitive strategic variables and financial performance variables. The results could then be counter checked by the results of the analysis of variance which would be described in the next section.

Investigate Causal Relationship Between Firms' Competitive Strategies and Their Financial Performance

Analysis of variance (ANOVA) procedure would be employed to compare the values of dependent variables (financial performance variables) for companies which fall into a number of different groups (along the strategic dimensions). This test was performed to assess how much variation (variance) of a dependent variable can be designed to different sources, including the independent variables and any interactions between such variables.

Frude (1993) explained that ANOVA calculates the variance of scores (financial performance variables) within condition (a group of firms) and between conditions (firms' groups). If the within-conditions variance is low compared to the between-conditions variance then it would seem that the scores for the dependent variable tend to be different conditions. This would suggest that the independent variable is able to explain a significant part of the overall variation in the scores.

The stages in the computation of variance can be outlined in the following way. First the between groups and within group's sum of squared deviations from the mean are calculated. Each of these values is then divided by the relevant degrees of freedom to yield a mean square value, and when the between groups mean square is divided by the within-groups mean square, a variance ratio (F-score) is obtained. If this value is sufficiently high (corresponding to a low probability) then it will be statistically significant, and the effect of the relevent independent variable will have been shown to be significant.

If the results of the ANOVA proved to be significant, the means of the particular financial performance variable for each of the strategic groups will be

calculated and plotted This graph would give a better understanding on the relationship that exist between them and also show the trends that might exist for the period of study, i.e., 1986-1992.

Cluster Firms Along the Competitive Strategic Variables

On the basis of the firms' strategic variables, the firms would be clustered in five ways by:

1. turnover,
2. type of activity,
3. extent of diversification,
4. extent of internationalisation, and
5. level of gearing.

Firstly, the firms would be clustered into four groups based on the turnover classification which was used by Jordan (1989) in his analysis as follows:

Group 1 - Turnover up to £50m;
Group 2 - Turnover £50.01m to £100.00m;
Group 3 - Turnover £100.01m to £500.01m; and
Group 4 - Turnover more than £500.01m.

However, Jordan's turnover classification for group 3 was between £100m to £300m, which would be more appropriate with the firms' turnover at that time. Since the volume of turnover has increased considerably, the classification was changed to a greater value so that the memberships of each class would be more evenly distributed.

The second way of clustering the firms would be on the basis of the type of activity and it would follow the specialisation ratio which was used by Rumelt (1974). In his

work, Rumelt categorised firms into four by means of the specialisation ratio (S.R.) as follows:

[a] single product firm - a firm which has an S.R. of between 0.95 and 1.0. This of firm tend to grow by means of expansion to the scale of its operate;

[b] dominant product firm - a firm which has an S.R. of between 0.7 and 0.95. This indicates a small degree of diversity but the company still relies heavily on a single main activity;

[c] related product firm - a firm which has an S.R. of less than 0.70 and diversifies by means which are tangibly related to its original skills, strengths, and activity;

[d] unrelated product firm - a firm which has an S.R. of less than 0.70 with diversification occurring through unrelated lines of expansion.

To ensure that a firm was relied heavily on the particular activity, it was decided that a firm would be grouped into that activity if the amount was more than 75% of the total turnover. The firms would be grouped into six as follows:

Group 1 - Diversified — if there was no activity which was more than 75% of the firm's turnover.

Group 2 - Contracting
Group 3 - Housing
Group 4 - Property
Group 5 - Building materials and plant supply
Group 6 - M&E services

— if this activity was more than 75% of the firm's turnover.

Thirdly, the firms would be grouped by the extent of diversification based on the formula suggested by Fiegenbaum (1987) that was: $1 - \sum_{i=1}^{n} p_i^2$

where, p_i = the relative size of the i^{th} line in the entire portfolio. Therefore if the value = 0, the index implies that the firm has only one line of business and is not diversified. On the other hand, if the value is toward 1, it means that many small lines of business exist in the portfolio, i.e., widely diversified. The grouping would be done as follows:

Group 1 -	0.00 - 0.20	not diversify;
Group 2 -	0.21 0.40	slightly diversify;
Group 3 -	0.41 - 0.60	diversify; and
Group 4 -	0.61 - 1.00	highly diversify.

The fourth way of grouping the firms would be on the basis of the degree of internationalisation. It would be accomplished in five groups as follows:

Group 1 -	less than 1.00 % of turnover from outside UK;
Group 2 -	1.01 - 10.0 % of turnover from outside UK;
Group 3 -	10.01 - 20.00 % of turnover from outside UK;
Group 4 -	20.01 - 30.00 % of turnover from outside UK; and
Group 5 -	more than 30.01 % of turnover from outside UK.

Finally, in the fifth approach, the level of gearing would be used as the basis of clustering the firms and it would be as follows:

Group 1 - 0.00 - 25.00 %

Group 2 - 25.01 - 50.00 %

Group 3 - 50.01 - 75.00 %

Group 4 - 75.01 - 100.00 %

Group 5 - more than 100.01 %

6.3.2 Phase 2 - Investigating the construction firms' strategic behaviour in three different economic periods

Sampling

The second phase of the study engaged the similar sample which had been employed in the first phase of this study that is the top 120 public limited construction firms in the UK. A questionnaire was sent by post to each of the firms. The respondents were requested to evaluate and to decide the importance of the strategic variables by means of circles on a scale ranging from 1 (which means not at all important) to 5 (which means extremely important) in the three different economic periods. The questionnaire was attached in appendix 2. The structure of the questionnaire was designed according to the theory of the development strategy (Johnson and Scholes 1993) whilst the variables were developed based on the information gathered from the companies' annual reports and accounts. The contents of the questionnaire dealt with the corporate and functional strategic dimensions which were adopted by the UK construction industry.

Identification of the Different Economic Periods

A thorough study of the construction firms' annual reports revealed that the economy of the UK was healthy and strong from 1986 to 1989. To support this argument, table 6.1 and 6.2 demonstrate the chairman's statements of two major construction firms which were Tarmac plc and John Laing plc. Tarmac described that the years from 1986 to 1988 as the very good, steady, and healthy economy but 1989 was a year of mixed fortunes. John Laing characterised the time frame of 1986 to 1989 as the record, successful, good, and continued success years. The turning point of the economic environment was in 1989 when the private housing development sector experienced the sudden fall in the demand. In the interim report in September 1989, the chairman of Wilson Bowden said that the housing market was the worst he had experienced in 25 years. The chairman of Prowting noted that the year ended 28th February 1990 saw completely different economic climate compared with that which existed at the time of their floatation on the London Stock Exchange in 1988.

Unlike 1989, which was regarded as the year of mix fortunes, 1990 was accepted by the construction industry as a year of recession. The following quotations which were extracted from the companies' annual reports express the industry's acceptance that 1990 was the year of severe recession.

> "The year has been one of the most difficult and disappointing for the British Construction Industry in living memory ..." The Chairman of Alfred McAlpine, 1990.

> "It is now generally accepted that Britain is in a recession, a state which the housing industry has been progressively experiencing for the past two years." The Chairman of Lovell, 1990.

"Subsequently conditions deteriorated, particularly in the UK and the US where the economies are now clearly in recession." The Chairman of Trafalgar House, 1990.

The state of recession continued with no sign of early recovery. In 1991 the construction industry changed the term recession into depression which indicated the prolonged and deep recession. The chairman of Tarmac observed in 1991 that the depression in the United Kingdom economy was at that time revealed not as a relatively serious cyclical downturn but as an extreme condition, not previously experienced in the market they served.

The gloomy economic climate continued into 1992 when most of the construction firms were severely hit. Major firms incurred substantial losses while some smaller firms went into liquidation as they could not stand the chaos. The chairman of Costain Group reported that he expected 1992 to be an extremely hard year. At that stage, however, he had no perception as to just how difficult it was going to be for the contracting and real estate markets worldwide.

1993 was still another year of recession. The chairman of EBC Group gave another scenario of the current economic downturn: "I am reporting Group profits of £931,000 before tax, a result which I regard as satisfactory after yet another year of severe recession in the contracting industry. More generally, although I believe that the process of economy recovery has begun, it will take sometime for the benefits to filter through to the construction industry which will continue to suffer from the problem of over capacity. Overall I remain very cautious on our prospect for 1994."

As far as future prospect was concerned the construction industry believed that the depression would be over by 1993 and the general economic condition would be improved. It was expected that the economic environment would be characterised

by a slow recovery in particular markets. The Joint Forecasting Committee of NEDO Construction Industry Sector Group expected the recession currently afflicting the industry to stretch into 1993, although it was able to look forward to its end in 1994 (NEDO 1992).

Against this background the study divides the economic period into three:

[a] 1986 - 1989 as a boom period;

[b] 1990 - 1993 as a recession period; and

[c] 1994 - onward as a future or recovery period.

Identification of Variables of the Construction Firms' Strategies

The identification of variables of the construction firms strategies variables would be carried out under the following headings:

- Directional strategies;
- Method strategies;
- Generic strategies;
- Diversification strategy;
- Internationalisation strategy;
- Functional strategies;
- Strategic resources;
- Financial performance measurements;
- Profit determinants;
- Loss determinants; and
- Strategic Management Practice.

Directional Strategies

Johnson and Scholes (1993) suggested that withdrawal, consolidation, market penetration, product development, market development and diversification are components of alternative directions. In this study, market penetration and market development would be dealt with under geographic spread while diversification would have its own heading. This study proposes expansion (growth), retrenchment, and status-quo (consolidation) as the components of directional strategies which were considered as more appropriate for the construction industry. Expansion or growth means that a firm intends to grow in its size, which may be in terms of the number of employees, the volume of work, facilities and equipment, and areas of operations. Retrenchment, which is the reverse of expansion, was used as a term to represent the reduction of the size of a firm in terms of the components which has been mentioned above. Status-quo or consolidation would indicate a firm's strategy taken in order to maintain its current portfolio. Therefore the directional strategies had three options:

- Expansion;
- Retrenchment; and
- Status-quo.

Method Strategies

Method strategies explain on how the firm's directional strategies could be implemented. Johnson and Scholes (1993) proposed that internal development, acquisition and merger, and joint-venture as the options available for method strategies. For many organisations internal development has been the primary method. Hillebrandt and Cannon (1990) noted that essentially there are two routes which are open to companies seeking to develop their own business or to move into new ones. These are by internal or external means. Internal means refer to the development of additional in-house facility where growth of existing activities is concerned, or of new skills, expertise and production facilities in the case of diversification. External

means refer to the acquisition of existing businesses. All those who were interviewed by Hillebrandt and Cannon (1990) accepted that both methods had to be pursued.

The other methods which were not widely being practiced in the construction industry are mergers and joint-venture. Mergers are typically the result of organisations coming together voluntarily; and this is likely to be because they are actively seeking synergistic benefits. Joint-venture had become increasingly popular since the firms could not always cope with the increasingly complex and bigger construction projects from internal resources alone. Therefore, method strategies had four options:

- Internal expansion;
- Acquisitions;
- Mergers; and
- Joint-venture.

Generic Strategies

There were a number of strategies which did not fall under any suitable headings, for instance, focus on core business (either contracting, housing, or property), reduce fixed cost and overhead, and offer financial packages (when the client was not able to raise the fund of a project). These strategies were clearly becoming the basis of the competitiveness of a construction firm and therefore would be categorised as generic strategies. Therefore the generic strategies were composed of:

- Focus on core business;
- Reduce fixed cost and overhead; and
- Offer financial packages.

Diversification Strategy

The Diversification of the selected UK construction firms had been investigated by Hillebrandt and Cannon (1990). It obviously showed that the three main activities of

the construction companies were building and civil engineering contracts, house building, and property development. There were a number of activities which were related to construction such as building material supply, plant hire, mechanical and electrical engineering services and builders' wholesalers. Some companies engaged in activities which were not related to construction like coal mining, car dealer, printing, waste disposal, consultancy, shipping and hotel industry. Therefore the Diversification strategy had five choices:

- Contracting;
- House building;
- Property development;
- Activities related to construction; and
- Activities not related to construction.

Internationalisation Strategy

Table 3.2 displays the value of construction works by the British firms internationally. Middle East had been the biggest overseas market for the British construction industry in 1982/83. This scenario had changed in 1987, when America took over the leading role as the biggest market. With the establishment of the single European market it was assumed that Europe would become the most important market outside the UK. Therefore, it was proposed that the Internationalisation strategy had six locations:

- Europe;
- America;
- Asia;
- Africa;
- Middle East; and
- Other continents.

Functional Strategies

There were some strategies which were normally executed at the functional level. These strategies were critical because the success of business strategy was relied upon them. In general, the overall improvement of the construction industry performance at the functional level is related to the management efficiency and the site productivity. The management efficiency could be achieved by learning and training of the skills either formally or from working experiences. The construction industry is labour intensive and the use of advanced technology might improve the level of productivity. Another important aspect at the operational level is marketing which has not been given enough attention by many construction firms. Therefore the functional strategies were composed of:

- Use of advanced technology;
- Invest in R&D; and
- Effective marketing.

Strategic Resources

Hillebrandt and Cannon (1990) found that the principal resource of construction companies is management. However, at the site level, a firm needs skilled workers in order to improve productivity and to produce a high quality of work. Another resource which is ciritical for the survival of a firm is finance. For most of the firms, their finance are obtained either form bank loans (and overdraft) or from the rights issues. The other important resources for a construction firm are plant and land banks (for the housebuilder). Therefore, the strategic resources for a construction firms included:

- Management;
- Skilled workers;
- Cash from borrowing;
- Cash from rights issues;
- Plant; and
- Land banks.

Financial Performance Measurements

There are many financial performance indicators which were used to represent the success or the failure of a firm in the previous research. The profitability of a firm might be represented by variables like pre-tax profit, return on capital employed (ROCE), and return on shareholders' funds (ROSF). The liquidity of a firm could be measured by variables such as cash flow analysis and liquidity ratios. The capability of a firm raises its own capital in relation to its long term liabilities would be demonstrated by the variable that was gearing. Therefore the respondents were asked to indicate the importance of the following financial performance indicators:

- Pre-tax profit;
- ROCE;
- ROSF;
- Cash flow;
- Liquidity ratios; and
- Gearing.

Profit Determinants

Profit might be determined by the internal factors or the external ones. The internal factors were the ones which could be controlled by a firm either at the corporate level or at the functional level. At the corporate level, a firm would decide on its type of businesses and the geographical coverage whether it would be regionally, nationally, or internationally. At the functional level, a firm had the capability to control its site productivity and the strictness of its cost control. However, the external factors like market condition and competition were beyond its control. Therefore the following factors were proposed to be the strategic determinants of profitability:

- Type of activity;
- Geographic spread;
- Market condition;

- Competition;
- Site productivity; and
- Strict cost control.

Loss Determinants

This question was an attempt to discover the most important causes of the firm's losses in the different economic climates. The similar variables of the previous question on profits' determinants were used. The selected factors are listed below:

- Type of activity;
- Geographic spread;
- Market condition;
- Competition;
- Site productivity; and
- Cost control.

Strategic Management Practice

Most of the text books on strategic management describe the practice of strategic management in three stages that are strategic analysis, strategic choices, and strategic implementation. However, the real practice of strategic management may differ in terms of its forms and techniques. Some major firms may have formal strategic planning whilst the smaller ones may have their strategy only in the head of their chief executives. The purpose of this question is to capture some of the important components of strategic management among the construction firms which have been reported in their annual reports. Therefore, some of the components of the strategic management practice were as follows:

- Anticipating changes in the market condition;
- Analysing competition;
- Measuring company's achievements in comparison with the targets;
- Having corporate strategy; and

- Employ external strategic management consultants.

The question of strategic management practices was asked to provide some additional information which was related to the focus of the study that was firms' strategies. It was to observe the tendency in implementing the various strategies which had been investigated in this study.

Statistical Analysis - Frequency Analysis and Comparison of Means

Data obtained were statistically analyse in two stages. In the first stage, the data were analysed by using frequency analysis. This was to show the trend of each variable. In the second stage, the data were analysed by using comparison of means to indicate the relative importance between the variables. Both analyses were executed by using SPSS for Microsoft Windows Release 5.0 (SPSS for Windows™ Release 5.0).

3.0 Summary

This chapter has described the methodology of this study, which was divided into two phases. Phase 1 deals with the relationships between competitive strategies and financial performances and phase 2 deals with the identification of appropriate firms' strategies in the three different economic periods. Data analysis for the first and the second phases of this study will be presented in chapter 7 and chapter 8 respectively. The empirical findings of this study and the discussion about them will be presented in chapter 9.

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CHAPTER 7

DATA ANALYSIS : PHASE 1

7.1 Introduction

This chapter will analyse the empirical findings of the relationship between the firms' competitive strategies and the firms' financial performance. It begins by explaining the response of the industry in providing the annual reports and accounts which are essential for this study. The response of the industry upon the questionnaire survey will be mentioned. Then the financial performance of the firms in a sample in terms of profitability, liquidity and turnover will be analysed. The next analysis is to investigate the correlation between competitive strategic variables and financial performance variables. Finally, the analysis of the results of anova test which exhibit the causal effects of the competitive strategies upon the financial performance will be outlined.

7.2 Annual Reports and Accounts

Out of 120 top construction public limited companies which were contacted, 71 firms responded positively by providing their annual reports and accounts as shown in table 7.01. The full set of annual reports and accounts was for the period of 1986-1992 which covers two different economic periods, i.e., boom and bust. However, not all of them sent the full set required because the copies were no longer available in their stocks. These reports were scrutinised in order to extract the essential information for the development of the questionnaire and to provide financial data for further analysis.

Table 7.01 - Firms' Annual Reports and Accounts

No.	Firm	No.	Firm
1.	Alfred McAlpine	37.	J. Smart & Co
2.	Allen	38.	Jackson Group
3.	AMEC	39.	Jarvis
4.	Balfour Beatty	40.	John Laing
5.	Barrat	41.	London & Clydeside
6.	Bellway	42.	Lovell
7.	Bellwinch	43.	M.P. Burke
8.	BenBailey Construction	44.	McCarthy & Stone
9.	Bernard Sunley	45.	McLaughlin & Harvey
10.	Bett	46.	Mowlem
11.	Booth Industries	47.	Newarthill
12.	Bucknall Group	48.	North Midland Construction
13.	C.H. Pearce	49.	P&O
14.	CALA	50.	Persimmon
15.	Campbell & Armstrong	51.	Pitchmastic
16.	Cape	52.	Pochin
17.	Charles Church	53.	Prowting
18.	Comben	54.	Raine Industries
19.	Costain	55.	Sindal
20.	Crest Nicholson	56.	Slough
21.	Donelon Tyson	57.	Speyhawk
22.	EBC Group	58.	Tarmac
23.	Edmond Holding	59.	Tay Homes
24.	Eleco	60.	Taylor Woodrow
25.	Ernest Green & Partners	61.	The Berkeley Group
26.	Eve Group	62.	The Shield Group
27.	Fairview Homes	63.	Tilbury
28.	Flaxyard	64.	Trafalgar
29.	Frogmore	65.	Try Group
30.	Galliford	66.	Wain Group
31.	George Wimpey	67.	Ward Holding
32.	Gleeson	68.	Wescol Group
33.	Henry Boot	69.	Westbury
34.	Higgs & Hill	70.	Wilson Bowden
35.	How Group	71.	Wilson Connolly
36	Ideal Homes		

Ten firms did reply via their receivers because they went into liquidation in 1991. These firms were Farr plc, Flaxyard plc, Hey & Croft plc, Hickman Boswell plc, Mowat Group plc, Nico Construction plc, Rush & Tompkins plc, Seaward plc, Turiff Corporation plc and West Industries plc. This was an early indication of the severity of the effects of the recession upon the construction industry.

7.3 Questionnaire Response

The postal questionnaires were administered to the similar 120 top construction public limited companies except those companies which were in liquidation. It means that 110 companies were given the questionnaire and 40 of them responded positively. Out of 40 responses 33 of them due to their completeness were taken as the sample of this study. Some financial performance data were not completed and they had to be supported by the data taken from the companies' annual reports. A list of firms which were taken as the sample is displayed in table 7.02. The number of the firms in the sample was sufficient for the statistical analysis purposes.

7.4 Financial Performance

The financial performance variables which were selected for the analyses were ROCE, ROSF, current ratio, quick ratio, and turnover. To illustrate the sample's financial performance each of these variables will be presented in this section. A mean value for each variable for each year from 1986 to 1992 will be calculated and plotted as a bar chart. The purpose of these charts is to show the samples companies financial achievements in two different economic conditions that were boom (1986-1989) and bust (1990-1992).

Table 7.02 - Construction firms in the sample

No.	Firm	No.	Firm
1.	Alfred McAlpine plc	21.	McCarthy & Stones plc
2.	Allen plc	22.	North Midland Const. plc
3.	Amec plc	23.	Persimmon plc
4.	Bett Brothers plc	24.	Prowting plc
5.	Cape plc	25.	Raine Industries plc
6.	Costain plc	26.	Slough Estates plc
7.	Crest Nicholson plc	27.	Tarmac plc
8.	EBC Group plc	28.	Tay Homes plc
9.	Edmond Holdings plc	29.	Taylor Woodrow plc
10.	Eve Group plc	30.	The Berkeley Group plc
11.	Fairview New Homes plc	31.	Tilbury Douglas plc
12.	Frogmore Estates plc	32.	Trafalgar House plc
13.	Galliford plc	33.	Wilson Bowden plc
14.	George Wimpey plc		
15.	Henry Boot & Sons plc		
16.	How Group plc		
17.	Jackson Group plc		
18.	John Laing plc		
19.	John Mowlem plc		
20.	Lovell Holdings plc		

7.4.1 ROCE

ROCE is a measure of a firm's profitability. The mean of ROCE of the sample is demonstrated in Figure 7.01. It can be seen that the trend of the mean of ROCE is moving upward from 19.62 % in 1986 to 23.07 % in 1988. However, it was down to 22.76 % in 1989 which was the year of transition from the up-turn to the down-turn in the construction market. A drastic fall was recorded in 1990 and 1991 when the mean of ROCE was down to 14.95 % and 7.09 % respectively. The effect of the recession was even worst in 1992 when ROCE went to negative level, i.e., -2.18.

7.4.2 ROSF

ROSF is another measure of a firm's profitability. Its values are slightly higher than the values of ROCE because shareholders' funds are only part of the capital employed. Figure 7.02 shows the mean of ROSF which has a similar trend to that of ROCE. However, it was moving upward from 1986 to 1989, i.e., from 25.01 % to 30.38 %. The first drop of ROSF happened in 1990 when it was down to 20.42%. It was then followed by two sharp and dramatic falls in 1991 and 1992 which was down to 2.92 % and -7.25 % respectively. It can be said that the effect of recession upon ROSF was realised in 1990 which was a year later than the effect on ROCE. However, the values of ROSF were much lower than the values of ROCE in the year 1991 and 1992.

Figure 7.01 - Mean of ROCE

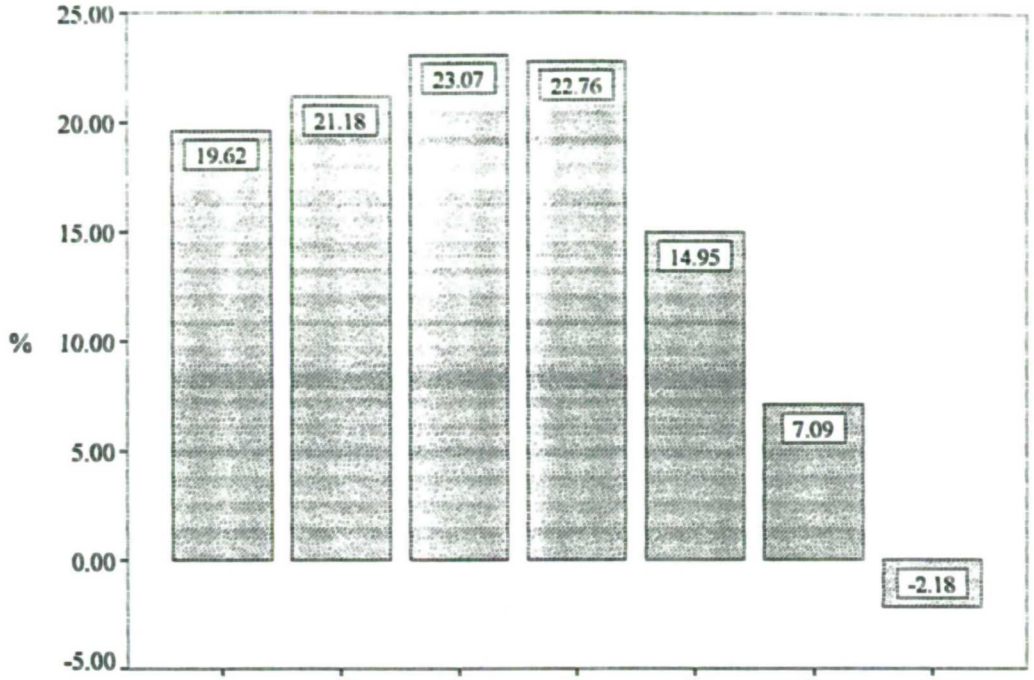
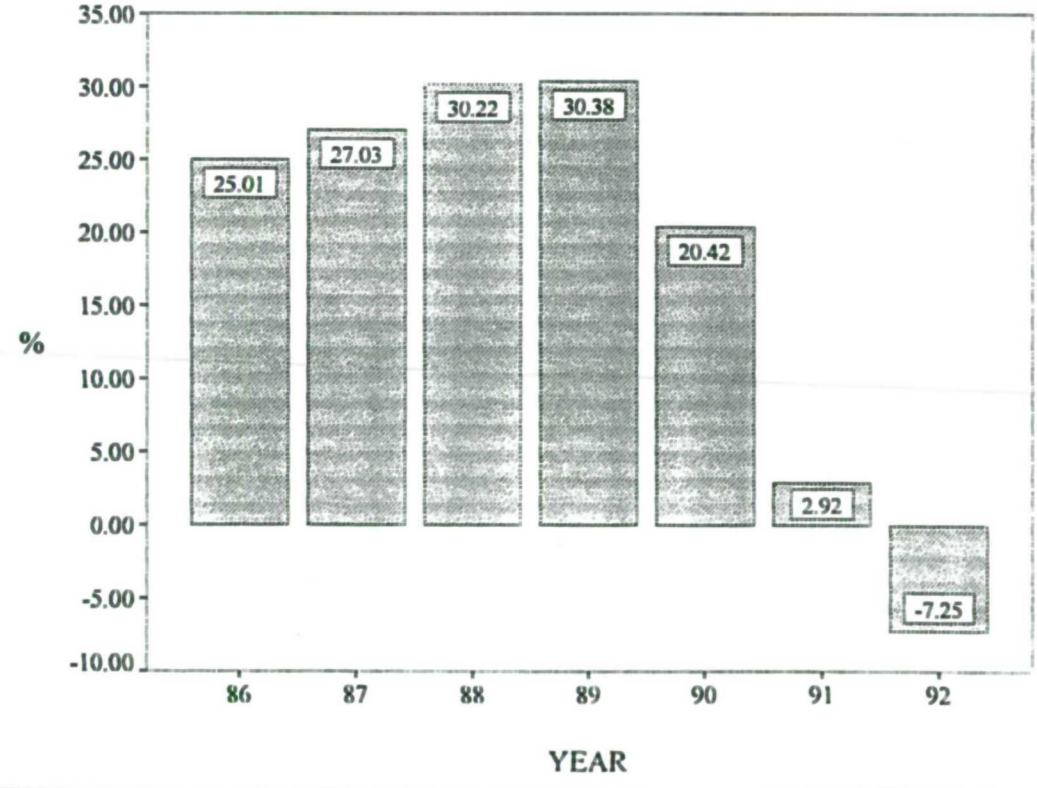


Figure 7.02 - Mean of ROSF



7.4.3 Current Ratio

Current ratio is a measure of liquidity for a firm which includes cash, stocks and work in progress in its derivation formula. It is noteworthy that the mean of current ratio of the sample kept moving upward from 1986 (1.54) to 1991 (2.02) as shown in figure 7.03. It means that its values were still moving upward despite the effects of the recession which started in 1989. Even when it started declining in 1992, the value was still higher (1.85) than the value in 1989 (1.73). This trend means that the construction industry increased its liquidity during the economic downturn and this is contradictory to the profitability measures. Therefore, the initial impression is that the construction industry had secured its strong cash position from different sources instead of the money retained of the profits. This is an interesting trend to be considered further in this study, i.e., the sources of strong cash in-flows of the construction firms.

7.4.4 Quick Ratio

Quick ratio is another measure for a firm's liquidity. It has a similar derivation formula as the current ratio but it does not take into account stocks and work in progress. Figure 7.04 displays the mean of quick ratio for the sample which has exactly a similar trend to that of current ratio. The mean value of this ratio was in upward direction since 1986 (0.54) to 1991 (0.87). This trend supports the indication that the costruction firms' cash positions were stronger during the harsh economic condition. In 1992, the mean value of quick ratio was still high at 0.73 in spite of the losses incurred by the industry. Therefore an investigation is necessary to explain the reasons of the high level of quick ratio during the slump.

Figure 7.03 - Mean of Current Ratio

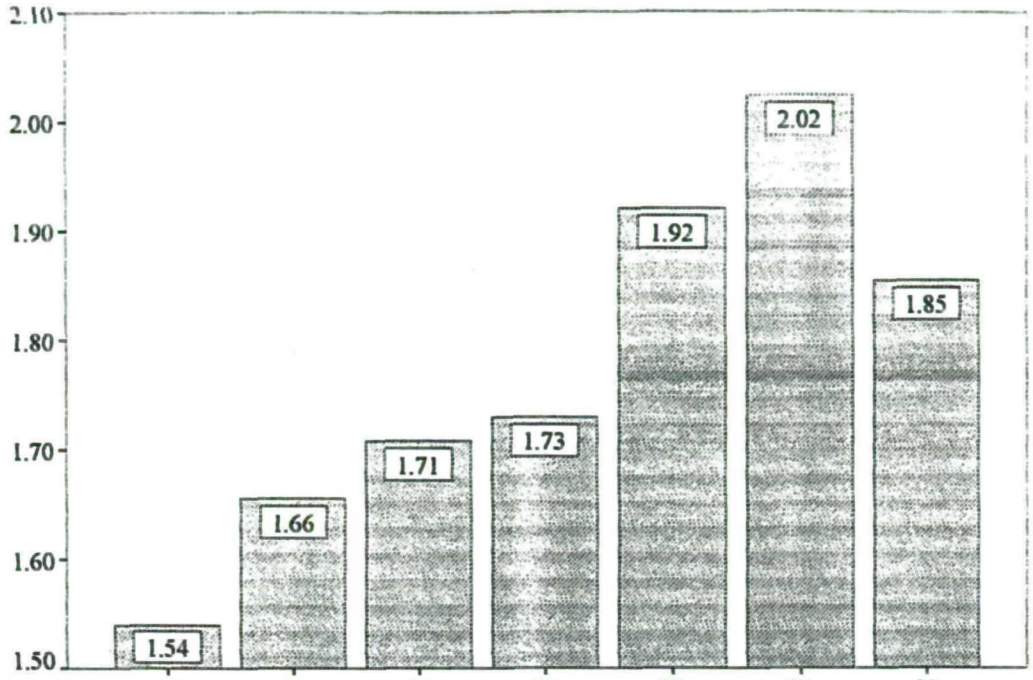
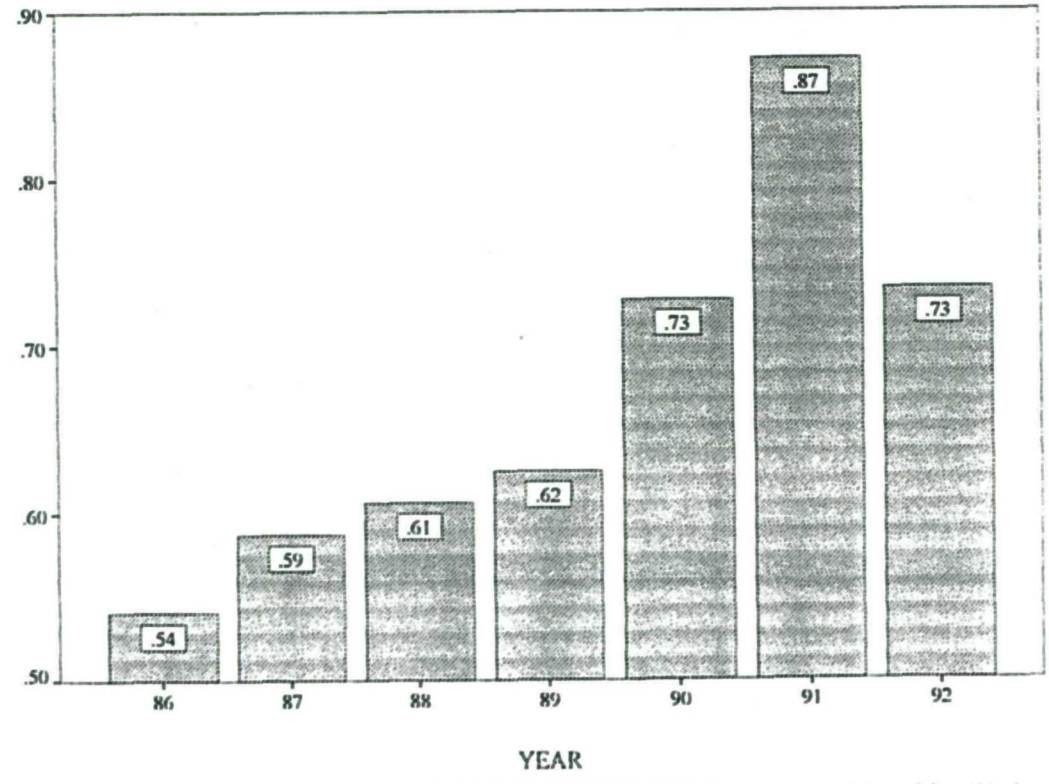


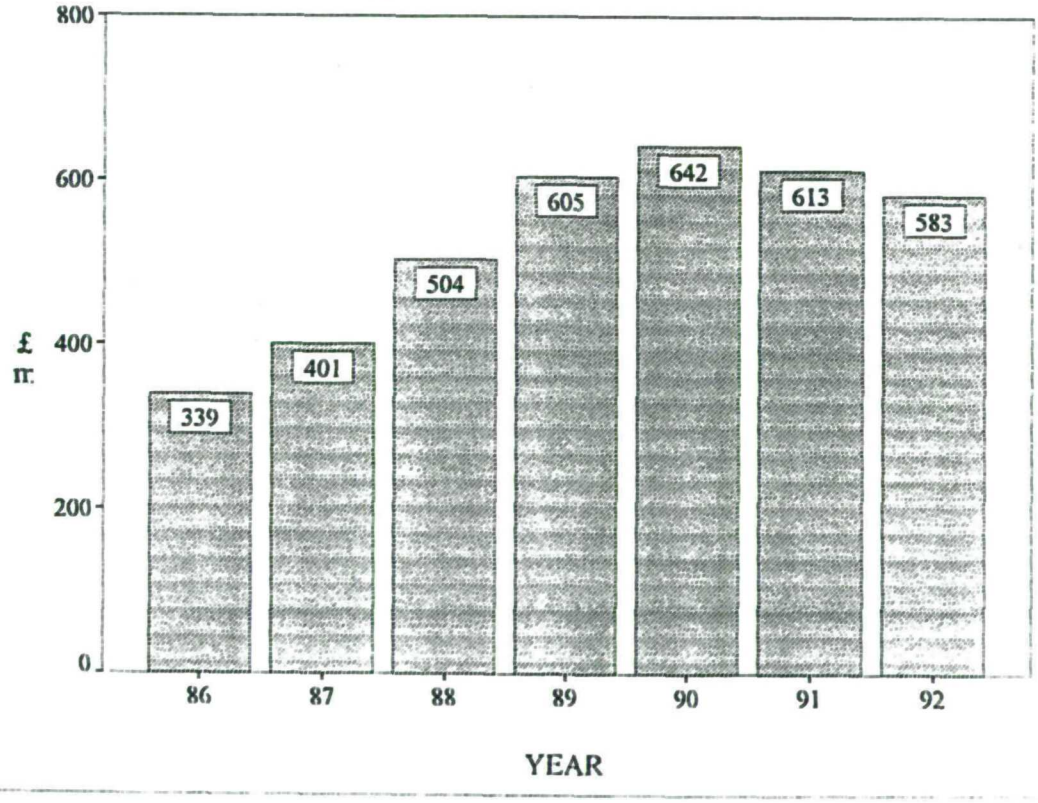
Figure 7.04 - Mean of Quick Ratio



7.4.5 Turnover

Figure 7.05 displays the mean value of turnover of the sample. Unlike the profitability ratios, the sample's turnover was seen as not seriously affected by the economic downturn. This trend could be understood since the nature of the construction projects was such that it takes a long period to be completed. Therefore the changes in the market would not affect the turnover of a firm instantly but it would do so in the long run. The mean value was growing steadily from 1986 (£339 million) to 1989 (£605 million). This is an economic period which was considered as healthy and favourable to the construction industry. This value was just slightly up to £642 million in 1990 which indicated that the amount of new works began to decrease due to the economic slump. In 1991 and 1992, this value was down slightly to £613 million and £583 million respectively as a result of the continuing recession.

Figure 7.05 - Mean of Turnover



7.5 Correlation between Firms' Competitive Strategic Variables and Their Financial Performance Variables

Firms' competitive strategic variables consisted of type of activity, extent of internationalisation and gearing. Three main types of activities which included contracting (building and civil engineering), house building and property development were chosen to represent types of activity. On the other hand, financial performance variables included ROCE, ROSF, current ratio, quick ratio and turnover. The correlation analysis was carried out year by year for the period of study which was from 1986 to 1992. The results of the correlation analysis are presented in table 7.03 to table 7.09 and a summary is displayed in table 7.10.

The following codes are used to represents the variables:

Code	Variable
CONTR	Contracting
HOUSE	Housing
PRODEV	Property Development
INTER	Internationalisation
GEAR	Gearing
ROCE	ROCE (return on capital employed)
ROSF	ROSF (return on shareholders' funds)
CURREN	Current Ratio
QUICK	Quick Ratio
TURN	Turnover

1986

Table 7.03 presents the correlation coefficients between variables in 1986. It shows that ROCE has positive correlation with housing and gearing. Other firms' competitive strategic variables have no relation with ROCE. Gearing also has a strong positive correlation coefficient with ROSF. It is interesting to note that contracting has a negative correlation with current ratio but it has a positive correlation with quick ratio. Contrary, housing has a positive correlation with current ratio but a negative correlation with quick ratio. There is also a positive correlation between internationalisation and quick ratio.

1987

In 1987, ROCE still has a positive correlation with housing but not with gearing as displayed in table 7.04. ROSF also has no correlation with gearing. There is a weak correlation between ROCE and internationalisation. Housing has similar correlation with current ratio and quick ratio as it has in 1986. However, contracting has no correlation with quick ratio. Internationalisation has strong correlation with turnover.

1988

In 1988 housing and ROCE have a positive correlation while gearing has a stronger correlation with ROSF as depicted in table 7.05. Internationalisation has a negative correlation with ROCE but a strong positive correlation with turnover. Housing is again negatively correlated with quick ratio but positively correlated with current ratio. Contracting, on the other hand, is positively correlated with quick ratio but positively correlated with current ratio. Internationalisation and turnover are still strongly positively correlated.

	CONTR86	HOUSE86	PRODEV86	INTER86	GEAR86	ROCE86	ROSF86	CURREN86	QUICK86	TURN86
CONTR86	1.0000 (33) P= .									
HOUSE86	-.7038 (33) P= .000	1.0000 (33) P= .								
PRODEV86	-.2430 (33) P= .173	-.1116 (33) P= .537	1.0000 (33) P= .							
INTER86	.3287 (33) P= .062	-.2088 (33) P= .243	-.0745 (33) P= .681	1.0000 (33) P= .						
GEAR86	-.0743 (33) P= .681	.1518 (33) P= .399	-.0036 (33) P= .984	.0863 (33) P= .633	1.0000 (33) P= .					
ROCE86	-.2662 (33) P= .134	.3810 (33) P= .029	-.3251 (33) P= .065	-.1538 (33) P= .393	.5406 (33) P= .001	1.0000 (33) P= .				
ROSF86	-.2240 (33) P= .210	.3265 (33) P= .064	-.2833 (33) P= .110	-.0977 (33) P= .588	.7300 (33) P= .000	.9561 (33) P= .000	1.0000 (33) P= .			
CURREN86	-.3947 (33) P= .023	.5705 (33) P= .001	-.1215 (33) P= .501	.0421 (33) P= .816	.0939 (33) P= .603	.0059 (33) P= .974	.0107 (33) P= .953	1.0000 (33) P= .		
QUICK86	.3846 (33) P= .027	-.5610 (33) P= .001	-.1253 (33) P= .487	.5306 (33) P= .001	-.1375 (33) P= .446	-.1854 (33) P= .302	-.1805 (33) P= .315	-.0639 (33) P= .724	1.0000 (33) P= .	
TURN86	.2262 (33) P= .206	-.3116 (33) P= .077	-.0403 (33) P= .824	-.0552 (33) P= .760	.1463 (33) P= .416	-.0880 (33) P= .626	.0302 (33) P= .867	-.1529 (33) P= .396	.0110 (33) P= .951	1.0000 (33) P= .

(Coefficient / (Cases) / 2-tailed Significance) " . " is printed if a coefficient cannot be computed

Table 7.04 - Correlation Coefficients in 1987

	CONTR87	HOUSE87	PRODEV87	INTER87	GEAR87	ROCE87	ROSF87	CURREN87	QUICK87	TURN87
CONTR87	1.0000									
	(33)									
	P= .									
HOUSE87	-.6810	1.0000								
	(33)	(33)								
	P= .000	P= .								
PRODEV87	-.2408	-.1552	1.0000							
	(33)	(33)	(33)							
	P= .177	P= .388	P= .							
INTER87	.1405	-.4362	.2045	1.0000						
	(33)	(33)	(33)	(33)						
	P= .436	P= .011	P= .254	P= .						
GEAR87	-.0345	.0387	.0275	.2704	1.0000					
	(33)	(33)	(33)	(33)	(33)					
	P= .849	P= .831	P= .879	P= .128	P= .					
ROCE87	-.3036	.3704	-.3384	-.3476	.1369	1.0000				
	(33)	(33)	(33)	(33)	(33)	(33)				
	P= .086	P= .034	P= .054	P= .047	P= .448	P= .				
ROSF87	-.2735	.3344	-.2826	-.2271	.3261	.9361	1.0000			
	(33)	(33)	(33)	(33)	(33)	(33)	(33)			
	P= .124	P= .057	P= .111	P= .204	P= .064	P= .000	P= .			
CURREN87	-.3788	.5647	-.0375	-.1104	-.0697	.1116	.1399	1.0000		
	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)		
	P= .030	P= .001	P= .836	P= .541	P= .700	P= .536	P= .437	P= .		
QUICK87	.3206	-.4705	-.0060	.1981	-.1369	-.2546	-.2415	.1866	1.0000	
	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)	
	P= .069	P= .006	P= .973	P= .269	P= .447	P= .153	P= .176	P= .298	P= .	
TURN87	.1995	-.2961	.0041	.7373	.3427	-.1405	-.0329	-.0693	.0173	1.0000
	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)
	P= .266	P= .094	P= .982	P= .000	P= .051	P= .435	P= .856	P= .702	P= .924	P= .

(Coefficient / (Cases) / 2-tailed Significance) " . " is printed if a coefficient cannot be computed

Table 7.05 - Correlation Coefficients in 1988

	CONTR88	HOUSE88	PRODEV88	INTER88	GEAR88	ROCE88	ROSF88	CURREN88	QUICK88	TURN88
CONTR88	1.0000									
	(33)									
	P= .									
HOUSE88	-.6405	1.0000								
	(33)	(33)								
	P= .000	P= .								
PRODEV88	-.2376	-.2605	1.0000							
	(33)	(33)	(33)							
	P= .183	P= .143	P= .							
INTER88	.1320	-.3718	.1826	1.0000						
	(33)	(33)	(33)	(33)						
	P= .464	P= .033	P= .309	P= .						
GEAR88	-.1637	.2772	-.1032	-.0117	1.0000					
	(33)	(33)	(33)	(33)	(33)					
	P= .363	P= .118	P= .568	P= .948	P= .					
ROCE88	-.2225	.4715	-.3364	-.4276	.0691	1.0000				
	(33)	(33)	(33)	(33)	(33)	(33)				
	P= .213	P= .006	P= .056	P= .013	P= .703	P= .				
ROSF88	-.2321	.4680	-.2951	-.2601	.7366	.6973	1.0000			
	(33)	(33)	(33)	(33)	(33)	(33)	(33)			
	P= .194	P= .006	P= .095	P= .144	P= .000	P= .000	P= .			
CURREN88	-.4035	.5043	.1845	-.1035	-.0670	.1125	.0344	1.0000		
	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)		
	P= .020	P= .003	P= .304	P= .567	P= .711	P= .533	P= .849	P= .		
QUICK88	.4290	-.5459	-.1050	.0189	-.2631	-.2620	-.3398	-.0418	1.0000	
	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)	
	P= .013	P= .001	P= .561	P= .917	P= .139	P= .141	P= .053	P= .817	P= .	
TURN88	.1648	-.2513	-.0531	.7514	.0087	-.1318	-.0011	-.1758	-.0747	1.0000
	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)
	P= .359	P= .158	P= .769	P= .000	P= .962	P= .465	P= .995	P= .328	P= .680	P= .

(Coefficient / (Cases) / 2-tailed Significance) " . " is printed if a coefficient cannot be computed

1989

In 1989, housing and ROCE have no correlation as shown in table 7.06. The other variables have similar patterns of correlations as those which existed in 1988.

1990

Table 7.07 displays another pattern of correlations between variables which are similar to those of 1989. No significant change had occured in this year.

1991

Unlike table 7.07, table 7.08 shows considerable changes in correlations between gearing and ROCE and ROSF. Gearing is negatively correlated with ROCE and ROSF. The other variables remain with the same correlations except contracting and quick ratio which had no correlation.

1992

In 1992, gearing was still negatively correlated as displayed in table 7.09. Contracting had a negative correlation with current ratio but a positive one with quick ratio. Housing as usual had a positive correlation with current ratio but a negative relation with quick ratio. Internatiolisation was still positively correlated with turnover.

Table 7.06 - Correlation Coefficients in 1989

	CONTR89	HOUSE89	PRODEV89	INTER89	GEAR89	ROCE89	ROSF89	CURREN89	QUICK89	TURN89
CONTR89	1.0000									
	(33)									
	P= .									
HOUSE89	-.6358	1.0000								
	(33)	(33)								
	P= .000	P= .								
PRODEV89	-.2922	-.2243	1.0000							
	(33)	(33)	(33)							
	P= .099	P= .210	P= .							
INTER89	.1514	-.3902	.1688	1.0000						
	(33)	(33)	(33)	(33)						
	P= .400	P= .025	P= .348	P= .						
GEAR89	-.1481	.3260	-.1197	.1145	1.0000					
	(33)	(33)	(33)	(33)	(33)					
	P= .411	P= .064	P= .507	P= .526	P= .					
ROCE89	.0688	.2139	-.2928	-.4632	-.1887	1.0000				
	(33)	(33)	(33)	(33)	(33)	(33)				
	P= .703	P= .232	P= .098	P= .007	P= .293	P= .				
ROSF89	-.0467	.3469	-.2819	-.3274	.5311	.6949	1.0000			
	(33)	(33)	(33)	(33)	(33)	(33)	(33)			
	P= .796	P= .048	P= .112	P= .063	P= .001	P= .000	P= .			
CURREN89	-.5599	.7027	.1199	-.1969	.2585	.1857	.3882	1.0000		
	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)		
	P= .001	P= .000	P= .506	P= .272	P= .146	P= .301	P= .026	P= .		
QUICK89	.5205	-.6921	-.1658	.2645	-.2642	.0608	-.0977	-.4215	1.0000	
	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)	
	P= .002	P= .000	P= .357	P= .137	P= .137	P= .737	P= .588	P= .015	P= .	
TURN89	.1804	-.2835	-.0910	.7641	.0778	-.2803	-.1855	-.2251	.1233	1.0000
	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)
	P= .315	P= .110	P= .615	P= .000	P= .667	P= .114	P= .301	P= .208	P= .494	P= .

(Coefficient / (Cases) / 2-tailed Significance) " . " is printed if a coefficient cannot be computed

Table 7.07 - Correlation Coefficients in 1990

	CONTR90	HOUSE90	PRODEV90	INTER90	GEAR90	ROCE90	ROSF90	CURREN90	QUICK90	TURN90
CONTR90	1.0000									
	(33)									
	P= .									
HOUSE90	-.6696	1.0000								
	(33)	(33)								
	P= .000	P= .								
PRODEV90	-.2863	-.1820	1.0000							
	(33)	(33)	(33)							
	P= .106	P= .311	P= .							
INTER90	.1633	-.4145	.1897	1.0000						
	(33)	(33)	(33)	(33)						
	P= .364	P= .016	P= .290	P= .						
GEAR90	-.1761	.3075	-.0743	.0432	1.0000					
	(33)	(33)	(33)	(33)	(33)					
	P= .327	P= .082	P= .681	P= .811	P= .					
ROCE90	.1611	-.0412	-.2339	-.3445	-.0972	1.0000				
	(33)	(33)	(33)	(33)	(33)	(33)				
	P= .370	P= .820	P= .190	P= .050	P= .591	P= .				
ROSF90	.0329	.1552	-.2385	-.2923	.4852	.8037	1.0000			
	(33)	(33)	(33)	(33)	(33)	(33)	(33)			
	P= .856	P= .388	P= .181	P= .099	P= .004	P= .000	P= .			
CURREN90	-.3591	.5306	.0828	-.3306	-.1008	-.2015	-.1808	1.0000		
	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)		
	P= .040	P= .001	P= .647	P= .060	P= .577	P= .261	P= .314	P= .		
QUICK90	.4479	-.5064	-.2209	.0466	-.1466	-.0504	-.1391	.0788	1.0000	
	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)	
	P= .009	P= .003	P= .217	P= .797	P= .415	P= .781	P= .440	P= .663	P= .	
TURN90	.2183	-.3208	-.1238	.7510	-.0111	-.2652	-.2143	-.2643	.0457	1.0000
	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)
	P= .222	P= .069	P= .492	P= .000	P= .951	P= .136	P= .231	P= .137	P= .801	P= .

(Coefficient / (Cases) / 2-tailed Significance) " . " is printed if a coefficient cannot be computed

Table 7.08 - Correlation Coefficients in 1991

	CONTR91	HOUSE91	PRODEV91	INTER91	GEAR91	ROCE91	ROSF91	CURREN91	QUICK91	TURN91
CONTR91	1.0000									
	(33)									
	P= .									
HOUSE91	-.6842	1.0000								
	(33)	(33)								
	P= .000	P= .								
PRODEV91	-.2958	-.1470	1.0000							
	(33)	(33)	(33)							
	P= .095	P= .414	P= .							
INTER91	.2296	-.4224	.0919	1.0000						
	(33)	(33)	(33)	(33)						
	P= .199	P= .014	P= .611	P= .						
GEAR91	.0389	.1010	.0023	.3683	1.0000					
	(33)	(33)	(33)	(33)	(33)					
	P= .830	P= .576	P= .990	P= .035	P= .					
ROCE91	-.0881	.1767	-.1371	-.1364	-.3561	1.0000				
	(33)	(33)	(33)	(33)	(33)	(33)				
	P= .626	P= .325	P= .447	P= .449	P= .042	P= .				
ROSF91	.0052	.0187	-.1278	-.0588	-.4085	.6631	1.0000			
	(33)	(33)	(33)	(33)	(33)	(33)	(33)			
	P= .977	P= .918	P= .478	P= .745	P= .018	P= .000	P= .			
CURREN91	-.3837	.4681	.2085	-.3632	-.0107	.2771	-.0502	1.0000		
	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)		
	P= .028	P= .006	P= .244	P= .038	P= .953	P= .119	P= .781	P= .		
QUICK91	.2988	-.4405	.1003	.0114	.0229	-.1458	-.1372	.2305	1.0000	
	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)	
	P= .091	P= .010	P= .579	P= .950	P= .900	P= .418	P= .447	P= .197	P= .	
TURN91	.2854	-.3226	-.1597	.7136	.2768	-.2008	-.1567	-.2972	-.0037	1.0000
	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)	(33)
	P= .107	P= .067	P= .375	P= .000	P= .119	P= .263	P= .384	P= .093	P= .984	P= .

(Coefficient / (Cases) / 2-tailed Significance) " . " is printed if a coefficient cannot be computed

Table 7.09 - Correlation Coefficients in 1992

	CONTR92	HOUSE92	PRODEV92	INTER92	GEAR92	ROCE92	ROSF92	CURREN92	QUICK92	TURN92
CONTR92	1.0000 (33) P= .									
HOUSE92	-.7114 (33) P= .000	1.0000 (33) P= .								
PRODEV92	-.2679 (33) P= .132	-.0959 (33) P= .595	1.0000 (33) P= .							
INTER92	.1740 (33) P= .333	-.4577 (33) P= .007	.2148 (33) P= .230	1.0000 (33) P= .						
GEAR92	-.0620 (33) P= .732	.1762 (33) P= .327	-.0719 (33) P= .691	.2951 (33) P= .095	1.0000 (33) P= .					
ROCE92	.1643 (33) P= .361	-.0391 (33) P= .829	.0628 (33) P= .728	-.2282 (33) P= .202	-.4988 (33) P= .003	1.0000 (33) P= .				
ROSF92	-.0333 (33) P= .854	.0918 (33) P= .611	.0703 (33) P= .698	-.4087 (33) P= .018	-.4678 (33) P= .006	.6904 (33) P= .000	1.0000 (33) P= .			
CURREN92	-.4410 (33) P= .010	.6532 (33) P= .000	.0526 (33) P= .771	-.4273 (33) P= .013	.0442 (33) P= .807	.0849 (33) P= .639	.1503 (33) P= .404	1.0000 (33) P= .		
QUICK92	.3846 (33) P= .027	-.5745 (33) P= .000	-.0988 (33) P= .584	.2559 (33) P= .151	.0090 (33) P= .961	-.0377 (33) P= .835	-.0631 (33) P= .727	-.1610 (33) P= .371	1.0000 (33) P= .	
TURN92	.2831 (33) P= .110	-.3486 (33) P= .047	-.1014 (33) P= .575	.7172 (33) P= .000	.3119 (33) P= .077	-.4163 (33) P= .016	-.3073 (33) P= .082	-.3147 (33) P= .074	.2042 (33) P= .254	1.0000 (33) P= .

(Coefficient / (Cases) / 2-tailed Significance) " . " is printed if a coefficient cannot be computed

Summary of Correlation Relatioships

The selected significant correlations from table 7.03 to table 7.09 are summarised in table 7.10 for a quick reference. In table 7.10, it can be seen that housing and ROCE are positively correlated between 1986 and 1988. Gearing and ROCE had positive correlation in 1986 but negative relation in 1991 and 1992. ROSF had also positive correlations from 1986 to 1990 before they changed to negative in 1991 and 1992. The other correlations are quite consistent throughout the period of study.

7.6 Causal Relationship Between Firms' Competitive Strategies and Their Financial Performance

The causal relationship analysis will be divided into two stages:

- Firms' grouping on the basis of the competitive strategy; and
- Analysis of variance of the financial performance by the competitive strategy.

7.6.1 Firms' Grouping

There are five competitive strategic variables based on which the firms will be clustered. These strategic variables are as follows:

- level of gearing;
- type of activity;
- extent of diversification;
- extent of internationalisation; and
- turnover.

Table 7.10 - Summary of Correlations between Firms' Strategic Variables and Financial Performance (Correlation Coefficient and *It's Significance Level*)

VARIABLES	YEAR						
	1986	1987	1988	1989	1990	1991	1992
Housing & ROCE	.3810 *.029*	.3704 *.034*	.4715 *.006*	ns	ns	ns	ns
Gearing & ROCE	.5406 *.001*	ns	ns	ns	ns	-.3561 *.042*	-.4988 *.003*
Gearing & ROSF	.7300 *.000*	ns	.7366 *.000*	.5311 *.001*	.4852 *.004*	-.4085 *.018*	-.4678 *.006*
International & ROCE	ns	-.3476 *.047*	-.4276 *.013*	-.4632 *.007*	-.3445 *.050*	ns	ns
Contracting & Current Ratio	-.3947 *.023*	-.3788 *.030*	-.4035 *.020*	-.5599 *.001*	-.3591 *.040*	-.3837 *.028*	-.4410 *.010*
Contracting & Quick Ratio	.3846 *.027*	ns	.4290 *.013*	.5205 *.002*	.4479 *.009*	ns	.3846 *.027*
Housing & Current Ratio	.5705 *.001*	.5647 *.001*	.5043 *.003*	.7027 *.000*	.5306 *.001*	.4681 *.006*	.6532 *.000*
Housing & Quick Ratio	-.5610 *.001*	-.4705 *.006*	-.5459 *.001*	-.6921 *.000*	-.5064 *.003*	-.4405 *.010*	-.5745 *.000*
International & Turnover	ns	.7373 *.000*	.7514 *.000*	.7641 *.000*	.7510 *.000*	.7136 *.000*	.7172 *.000*

7.6.1.1 Level of Gearing

The level of gearing is categorised into five and the firms are clustered based on this category. Table 7.11 shows the firms' groups based on the level of gearing. Clearly the level of gearing is changing year by year for each individual firm. In 1986 most of the firms were not highly geared. In this year, the level of gearing of two-thirds of the firms was less than 50 %. This trend continued untill 1989 when some companies began to increase the gearing level up to more than 100.00 %, such as Costain and John Laing. In 1990 some other firms had increased their level of gearing up to the same level which included Bett Brothers and Trafalgar House. In 1991, Crest Nicholson and Lovell were also grouped into the highly geared firms. This trend continued into 1992 which indicates that the industry needed financial support to face the severe market condition. However, there were some companies which were continuously at the high level of gearing such as Fairview Homes, McCarthy and Trafalgar House.

7.6.1.2 Type of Activity

The firms are grouped into six type of activities as follows: diversified; contracting; housing; property; building materials supplier; and mechanical & electrical. Table 7.12 shows the firms grouping on the basis of the type of activity. Sixteen firms are categorised as diversified firms in 1986 which means that they are involved in more than one activity. The contracting group has seven members while housing group has eight memberships in the same year.

Table 7.11 - Firms grouping based on the level of gearing

No.	Company	1986	1987	1988	1989	1990	1991	1992
1.	Alfred McAlpine	1	3	2	4	4	2	2
2.	Allen	2	2	2	1	1	1	2
3.	AMEC	1	2	1	2	2	2	2
4.	Bett Brothers	1	2	3	3	5	5	5
5.	Cape	2	2	2	1	1	1	1
6.	Costain	2	3	3	5	5	5	5
7.	Crest Nicholson	2	1	2	1	4	5	5
8.	EBC Group	3	4	1	2	2	2	3
9.	Edmond Holding	2	1	2	4	3	2	1
10.	Eve Group	1	1	1	1	1	1	1
11.	Fairview Homes	5	4	5	5	5	5	5
12.	Frogmore	1	2	1	2	1	1	2
13.	Galliford	1	1	1	1	1	2	1
14.	George Wimpey	2	2	3	3	3	3	2
15.	Henry Boot	2	1	1	2	1	1	1
16.	How Group	1	1	1	1	1	1	2
17.	Jackson Group	1	2	5	3	5	5	4
18.	John Laing	2	3	2	5	3	4	2
19.	John Mowlem	2	3	3	4	4	3	2
20.	Lovell	1	2	2	3	4	5	5
21.	McCarthy	3	5	5	5	5	4	5
22.	North Midland	3	3	3	3	3	2	2
23.	Persimmon	1	3	2	2	2	1	1
24.	Prowting	1	1	1	1	2	2	3
25.	Raine Industries	2	2	3	2	2	2	3
26.	Slough Estates	2	2	3	3	4	3	2
27.	Tarmac	2	3	4	3	2	3	4
28.	Tay Homes	1	1	2	3	3	4	3
29.	Taylor Woodrow	2	1	2	2	3	2	1
30.	The Berkeley	2	2	1	2	1	1	1
31.	Tilbury	2	2	2	1	1	3	1
32.	Trafalgar	5	4	4	4	5	5	5
33.	Wilson Bowden	3	1	1	1	1	1	1

Legend : Level of gearing

1 = 00.00 - 25.0 %
2 = 25.01 - 50.00 %
3 = 50.01 - 75.00 %
4 = 75.01 - 100.00 %
5 = More than 100.01 %

The building materials supplier group and the mechanical & electrical group had one members each in 1986. There is no company which can be classified into the property group in 1986. Most of the firms were quite stable in their groups and maintained their memberships throughout the period of study. However, some firms did change their grouping. For instance, Frogmore and Slough Estates moved from the diversified group into the property group. John Laing and Tilbury moved from the contracting group into the diversified group and then moved back to the contracting group. These changes indicate that the proportion of works are changing over times.

7.6.1.3 Extent of Diversification

The extent of diversification of a firm is measured by using a formula which was used by Fiegenbaum (1987). The firms are grouped into four as follows: (1) Not diversify; (2) Slightly diversify; (3) Diversify; and (4) Highly diversify (refer table 7.13). Eight firms were not diversified at all throughout the period of study. They were normally engaged in one type of business activity. On the other extreme, two firms (George Wimpey and Tarmac) were consistently at the high level of diversification. Some firms were changing either from group 2 into group 3 or from group 3 into group 4. However, Trafalgar House had moved from group 3 into group 4 and then moved back into group 3 and finally into group 2. This movement indicates that during the boom period, Trafalgar House had diversified it's activities. However, in 1990, when the recession started, this company reduced it's activities to the same level of 1987. In 1991 and 1992, Trafalgar House further reduced it's activities to the level of slightly diversify. This implied that the effects of the recession had forced this company to reduce its capacity and to refocus on it's core businesses.

Table 7.12 -Firms grouping based on the type of activity

No.	Company	1986	1987	1988	1989	1990	1991	1992
1.	Alfred McAlpine	1	1	1	1	1	1	1
2.	Allen	1	1	1	1	1	1	1
3.	AMEC	1	1	1	1	1	1	1
4.	Bett Brothers	1	1	1	1	1	1	1
5.	Cape	5	5	5	5	5	5	5
6.	Costain	1	1	1	1	1	1	1
7.	Crest Nicholson	1	1	1	1	1	1	1
8.	EBC Group	2	1	1	2	2	1	1
9.	Edmond Holding	3	3	3	3	3	3	3
10.	Eve Group	2	2	2	2	2	2	2
11.	Fairview Homes	3	3	3	3	3	3	3
12.	Frogmore	1	1	4	4	4	4	1
13.	Galliford	1	1	1	1	1	1	1
14.	George Wimpey	1	1	1	1	1	1	1
15.	Henry Boot	2	2	2	2	2	2	2
16.	How Group	6	6	6	6	6	6	6
17.	Jackson Group	2	2	1	2	2	2	2
18.	John Laing	2	2	1	1	2	2	2
19.	John Mowlem	1	1	1	1	1	1	1
20.	Lovell	1	1	1	1	1	1	1
21.	McCarthy	3	3	3	3	3	3	3
22.	North Midland	2	2	2	2	2	2	2
23.	Persimmon	3	3	3	3	3	3	3
24.	Prowting	3	3	3	3	3	3	3
25.	Raine Industries	1	1	1	1	2	2	2
26.	Slough Estates	1	4	4	4	4	4	4
27.	Tarmac	1	1	1	1	1	1	1
28.	Tay Homes	3	3	3	3	3	3	3
29.	Taylor Woodrow	1	1	1	1	1	1	1
30.	The Berkeley	3	3	3	3	3	3	3
31.	Tilbury	2	2	1	1	2	2	2
32.	Trafalgar	1	1	1	1	1	2	2
33.	Wilson Bowden	3	3	3	3	3	3	3

Legend: Type of activity

1 = Diversified
2 = Contracting
3 = Housing
4 = Property
5 = Building material supplier
6 = Mechanical & Electrical Services

Table 7.13 -Firms grouping based on the extent of diversification

No.	Company	1986	1987	1988	1989	1990	1991	1992
1.	Alfred McAlpine	3	3	3	3	3	3	3
2.	Allen	3	3	3	3	3	3	3
3.	AMEC	3	3	3	3	3	3	3
4.	Bett Brothers	4	4	4	4	3	3	3
5.	Cape	1	3	3	3	3	3	3
6.	Costain	3	3	3	3	3	3	3
7.	Crest Nicholson	4	4	4	4	3	4	3
8.	EBC Group	2	3	3	2	2	3	2
9.	Edmond Holding	1	1	1	1	1	1	1
10.	Eve Group	1	2	1	1	2	1	1
11.	Fairview Homes	1	1	1	1	1	1	1
12.	Frogmore	2	3	2	1	2	2	3
13.	Galliford	3	3	3	3	3	3	3
14.	George Wimpey	4	4	4	4	4	4	4
15.	Henry Boot	2	2	2	2	2	2	2
16.	How Group	2	2	2	2	3	1	2
17.	Jackson Group	2	2	2	2	2	2	2
18.	John Laing	2	2	3	3	2	1	2
19.	John Mowlem	3	3	3	3	3	3	3
20.	Lovell	3	3	3	3	3	3	3
21.	McCarthy	1	1	1	1	1	1	1
22.	North Midland	1	1	1	1	1	1	1
23.	Persimmon	1	1	1	1	1	1	1
24.	Prowting	1	1	1	1	1	1	1
25.	Raine Industries	3	3	2	3	2	2	2
26.	Slough Estates	3	2	2	2	1	2	2
27.	Tarmac	4	4	4	4	4	4	4
28.	Tay Homes	1	1	1	1	1	1	1
29.	Taylor Woodrow	3	3	3	3	3	3	3
30.	The Berkeley	1	1	1	1	1	1	1
31.	Tilbury	2	2	2	3	2	2	2
32.	Trafalgar	3	3	4	4	3	2	2
33.	Wilson Bowden	2	2	2	2	2	2	2

Legend : Extent of diversification

1 = 0.00 - 0.20 (not diversify)
2 = 0.21 - 0.40 (slightly diversify)
3 = 0.41 - 0.60 (diversify)
4 = 0.61 - 1.00 (highly diversify)

7.6.1.4 Extent of Internationalisation

In this study, internationalisation refers to the work secured by the construction companies from outside the UK which includes Europe. The firms are clustered into five groups as displayed in table 7.14. The majority of the firms are not involved in overseas work and are clustered into Group 1. In fact, there are only two firms (Trafalgar and Costain) which have overseas works more than 30.00 % of the total turnover. They are followed by George Wimpey, Slough Estates and Taylor Woodrow which have the average percentage between 21.00 to 30.00 % of their work from overseas. AMEC, John Mowlem and Tarmac belong to the group with the lower percentage, that is 11.00 to 20.00 %. This sample shows that the majority of the firms are considered as the national company rather than the international ones.

7.6.1.5 Turnover

On the basis of the firms' turnover, the sample is grouped into four as follows: (1) up to £50 m; (2) 50.01 to 100.00 m; (3) 100.01 to 500.00 m; and (4) more than 500.01 m. The memberships of the groups are demonstrated in table 7.15. Three firms remain in the first group which means that their turnovers did not exceed £50.00 m throughout the period of 1986-92. Ten firms had grown from group 1 into group 2 or 3 which indicates that these firms were growing in terms of turnover during this period. Group 3 and Group 4 has eight and nine members respectively. Therefore, the memberships of the groups based on the firms' turnover are quite well distributed.

Table 7.14 -Firms grouping based on the extent of internationalisation

No.	Company	1986	1987	1988	1989	1990	1991	1992
1.	Alfred McAlpine	2	3	3	2	2	3	3
2.	Allen	1	1	1	1	1	1	1
3.	AMEC	3	3	3	3	3	3	3
4.	Bett Brothers	1	1	1	1	1	1	1
5.	Cape	4	4	3	2	2	3	5
6.	Costain	5	5	5	5	4	5	5
7.	Crest Nicholson	2	2	2	2	2	1	1
8.	EBC Group	1	1	1	1	1	1	1
9.	Edmond Holding	1	1	1	1	1	1	1
10.	Eve Group	2	2	2	2	2	2	2
11.	Fairview Homes	1	1	1	1	1	1	1
12.	Frogmore	1	1	1	1	1	1	1
13.	Galliford	2	2	2	2	2	1	1
14.	George Wimpey	4	4	4	4	4	3	4
15.	Henry Boot	3	2	2	2	2	1	1
16.	How Group	2	2	2	2	2	1	1
17.	Jackson Group	1	1	1	1	1	1	1
18.	John Laing	3	2	2	2	2	2	2
19.	John Mowlem	3	3	2	3	3	4	4
20.	Lovell	1	1	1	1	1	2	2
21.	McCarthy	2	2	2	2	2	2	1
22.	North Midland	1	1	1	1	1	1	1
23.	Persimmon	1	1	1	1	1	1	1
24.	Prowting	1	1	1	1	1	1	1
25.	Raine Industries	2	2	1	2	2	2	2
26.	Slough Estates	5	4	4	4	4	4	5
27.	Tarmac	3	3	3	3	3	3	3
28.	Tay Homes	1	1	1	1	1	1	1
29.	Taylor Woodrow	4	4	4	4	4	4	3
30.	The Berkeley	1	1	1	1	1	1	1
31.	Tilbury	1	1	1	2	2	2	2
32.	Trafalgar	5	5	5	5	5	5	5
33.	Wilson Bowden	1	1	1	1	1	1	1

Legend : Percentage of work from outside UK in relation to the total turnover

1 = 0.00 %
2 = 1.00 - 10.00 %
3 = 11.00 - 20.00 %
4 = 21.00 - 30.00 %
5 = 31.00 - 100.00 %

Table 7.15 -Firms grouping based on the firm's turnover

No.	Company	1986	1987	1988	1989	1990	1991	1992
1.	Alfred McAlpine	3	4	4	4	4	4	4
2.	Allen	1	1	1	1	2	2	2
3.	AMEC	4	4	4	4	4	4	4
4.	Bett Brothers	1	1	1	1	1	1	1
5.	Cape	3	3	3	3	3	3	3
6.	Costain	4	4	4	4	4	4	4
7.	Crest Nicholson	3	3	3	3	3	3	3
8.	EBC Group	2	2	2	2	2	2	2
9.	Edmond Holding	1	1	1	1	1	1	1
10.	Eve Group	1	1	1	1	2	1	1
11.	Fairview Homes	1	1	1	1	2	3	2
12.	Frogmore	1	2	2	2	1	1	1
13.	Galliford	2	3	3	3	3	3	3
14.	George Wimpey	4	4	4	4	4	4	4
15.	Henry Boot	3	3	3	3	3	3	3
16.	How Group	2	3	3	3	3	3	3
17.	Jackson Group	1	1	1	2	2	2	2
18.	John Laing	4	4	4	4	4	4	4
19.	John Mowlem	4	4	4	4	4	4	4
20.	Lovell	3	3	3	3	3	3	3
21.	McCarthy	2	2	3	3	2	2	2
22.	North Midland	1	1	1	1	1	1	1
23.	Persimmon	1	2	3	3	3	3	3
24.	Prowting	1	2	2	2	2	1	1
25.	Raine Industries	1	1	3	3	3	3	3
26.	Slough Estates	3	3	3	3	3	3	3
27.	Tarmac	4	4	4	4	4	4	4
28.	Tay Homes	1	1	1	2	2	2	2
29.	Taylor Woodrow	4	4	4	4	4	4	4
30.	The Berkeley	1	2	2	1	2	2	3
31.	Tilbury	3	3	3	3	3	3	3
32.	Trafalgar	4	4	4	4	4	4	4
33.	Wilson Bowden	2	2	3	3	3	3	3

Legend : Firm's Turnover

1 = up to £50.00 m

2 = 50.01 to 100.00 m

3 = 100.01 to 500.00 m

4 = more than 500.01 m

7.6.2 Analysis of Variance (Anova)

The purpose of the analysis of variance test is to validate the causal effects of the competitive strategy upon the financial performance. It will investigate whether the firm's financial achievement within a group (based on competitive strategy) would tend to have a similar value. This similarity indicates that the competitive strategy has affected their financial performance. As a result of the ANOVA test, if the `F' value is significant statistically, then an inference can be made that a certain competitive strategy affected the financial performance of a firm.

In this analysis, ANOVA test of each of the financial performance variables will be done one by one as follows: ROCE, ROSF, current ratio, quick ratio and turnover. Then, if a result indicates that there is a significant relationship between a financial performance variable and a competitive strategic variable, a graph which shows mean values of that financial performance of the firms' groups will be plotted. This graph will show the details of the effects of the competitive strategic variable on the financial performance variable.

7.6.2.1 ROCE

Table 7.16 displays the results of ANOVA test of ROCE by the competitive strategies. There are two competitive strategies which affect the ROCE, i.e., the type of activity and the level of gearing. However, the relationships between these two strategies and ROCE exist in a different period. The type of activity affects ROCE between 1986 and 1988 which was the period of strong and stable economy. On the other hand, the effects of the level of gearing upon ROCE exist in 1986 and then for a longer period from 1989 to 1992. The results indicate that a firm's level of gearing determines the ROCE of the firm in both periods, i.e.,

boom and bust while a firm's type of activity determines the ROCE only during the boom.

Figure 7.06 illustrates the mean values of the firms' ROCE by the level of gearing. In 1986 the firms which were highly geared, i.e., more than 75 % had the highest ROCE. However, these firms ended at the bottom level of ROCE by 1992 as a result of the long and continuous depression. This trend indicates that high gearing is favourable during the strong economic period. Unfortunately in the economic downturn high gearing would give devastating results. On the other hand, low and medium level of gearing are producing more stable ROCE even when the market conditions are deteriorating. In fact those firms with the lowest level of gearing are able to maintain their profitability and were at the top position in 1989 and 1992.

The mean values of ROCE of the firms by the type of activity are displayed in figure 7.07. Mechanical & electrical services and plant & building materials supplier are only represented by one firm each. Their trends may not be representative and are shown here for the purpose of comparison. Clearly the housing group had the highest ROCE throughout the boom period at around 30%. Its ROCE falls down in 1989 and 1990 but goes up again in 1991. In 1992 its ROCE ended at the same level as the property group. The contracting and the diversified groups had quite a similar trend from 1986 to 1989. After that period, the contracting group's performance was much better and ended at the top in 1992. The diversified group however ended at the bottom level in 1992. Obviously the property group's ROCE which is between 5-10% was at the lowest level most of the years.

Table 7.16 - Analysis of Variance of ROCE by Competitive Strategy
[F value and Significance of F]

STRATEGIC GROUP	YEAR						
	1986	1987	1988	1989	1990	1991	1992
Turnover	ns	ns	ns	ns	ns	ns	4.445 .011
Type of Activity	2.908 .039	6.040 .001	4.184 .006	ns	ns	ns	ns
Extent of Diversification	ns	ns	ns	ns	ns	ns	ns
Extent of Internationalisation	ns	ns	ns	ns	ns	ns	ns
Level of Gearing	3.907 .019	ns	ns	3.398 .022	3.015 .035	2.706 .051	3.287 .025

ns = not significant

Figure 7.06 - ROCE by Gearing

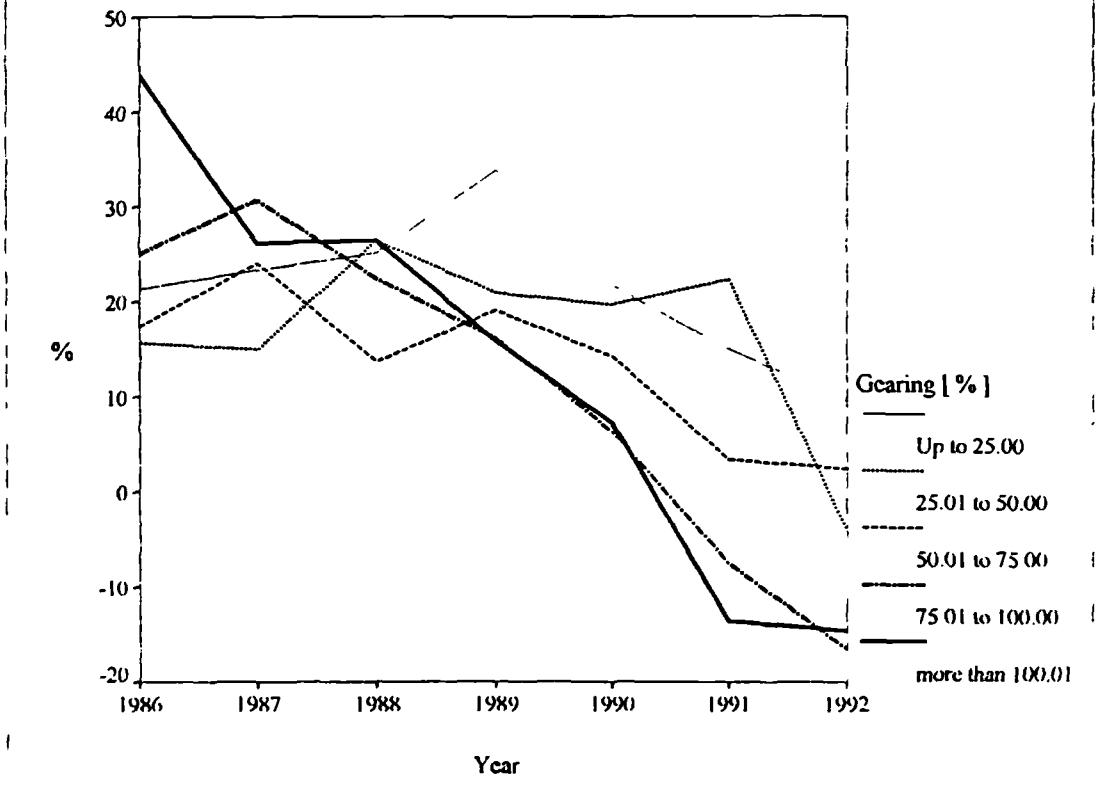
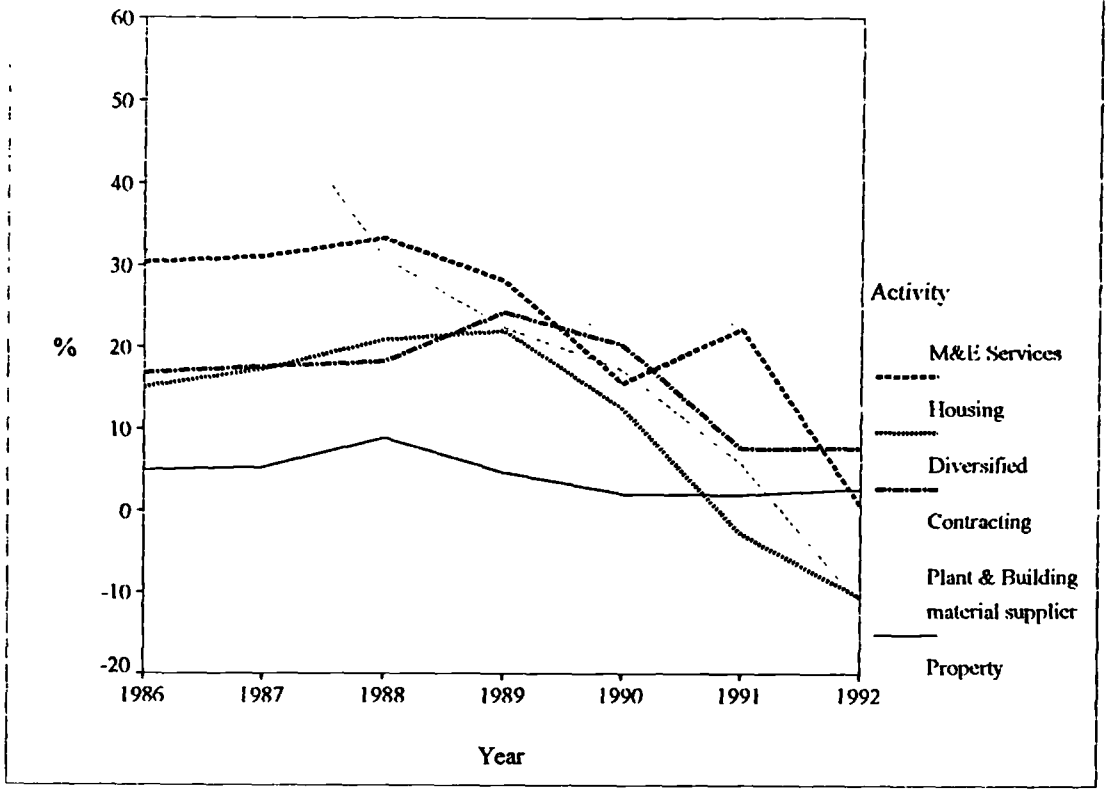


Figure 7.07 - ROCE by Type of Activity



7.6.2.2 ROSF

ROSF is another measurement of a firm's profitability. Its relationships with the competitive strategies are displayed in table 7.17. It has no relationship with turnover, or the extent of diversification or the extent of internationalisation. However, the results show that the type of activity had affected ROSF in 1987 and 1988. It means that certain types of activity did produce a consistent ROSF among the firms within the group in those particular years. Clearly, the level of gearing had a strong effect on the firms' ROSF as shown in 1986, 1987, 1988 and 1991. The significance of the 'F' values is strong in 1986 and 1991 but not so in 1987 and 1988.

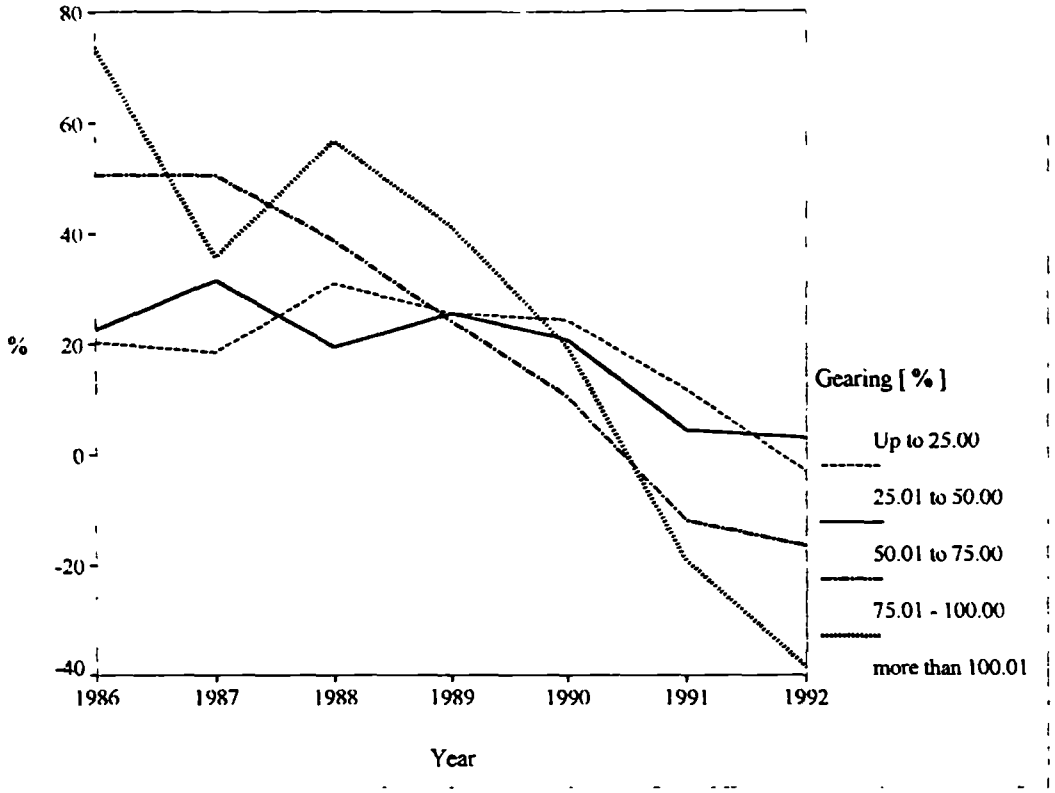
Figure 7.08 demonstrates the effects of the level of gearing upon ROSF. The group of firms with the highest level of gearing, i.e., more than 100 %, yielded the highest ROSF which was more than 70 % in 1986. However, this group's performance was at the bottom in 1992 (nearly -40 %). The group with the second highest level of gearing experienced a similar trend. In 1986 this group managed to yield ROSF at 50 % but in 1992 it ended up at the negative level. Those groups which have lower levels of gearing record a more stable trend throughout the period. In 1986 these groups yielded quite modest ROSF that was between 20 to 25 % and in 1992 they still had positive returns. The lowest level which was not more than 25 % produced the highest ROSF in 1992.

Table 7.17 - Analysis of Variance of ROSF by Competitive Strategy
[F value and Significance of F]

Competitive Strategy	**Year**						
	1986	1987	1988	1989	1990	1991	1992
Turnover	ns	ns	ns	ns	ns	ns	ns
Type of Activity	ns	3.070 .025	2.673 .044	ns	ns	ns	ns
Extent of Diversification	ns	ns	ns	ns	ns	ns	ns
Extent of Internationalisation	ns	ns	ns	ns	ns	ns	ns
Level of Gearing	7.871 .001	2.784 .046	3.184 .028	ns	ns	4.292 .008	ns

ns = not significant

Figure 7.08 - ROSF by Gearing



7.6.2.3 Current Ratio

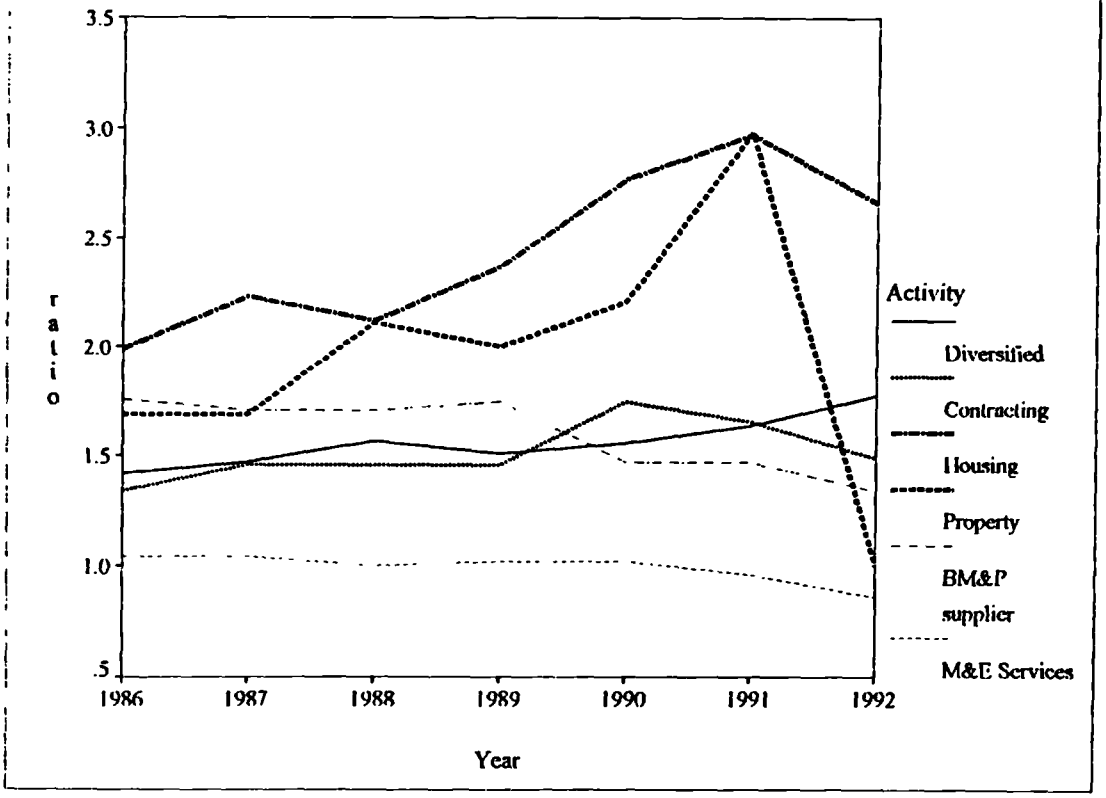
Current ratio is a ratio between cash, stocks and work in progress (as current assets) divided by current liabilities. Table 7.18 shows that the type of activity has strong and continuous relationships with current ratio. Other competitive strategies which include turnover, extent of diversification and extent of internationalisation have also affected current ratio but only for certain years. Figure 7.09 illustrates the effects of the type of activity upon the level of current ratio. The current ratio of the housing activity was consistently at the top within a range of 2.0 and 3.0 throughout the period of study. The next highest current ratio was for the property activity which achieved the same values as the housing in 1988 and 1991. However, the current ratio of the property suddenly crashed to the bottom in 1992. Diversified and contracting activities had quite stable current ratio values at 1.5 for the period of 1986-92.

Table 7.18 - Analysis of Variance of Current Ratio by Competitive Strategy [F value and Significance of F]

STRATEGIC GROUP	YEAR						
	1986	1987	1988	1989	1990	1991	1992
Turnover	ns	ns	ns	ns	ns	3.446 .029	3.199 .038
Type of Activity	5.304 .003	2.966 .029	2.836 .035	7.732 .000	2.925 .031	2.611 .047	2.734 .040
Extent of Diversification	4.590	5.861 .003	ns	4.774 .008	ns	ns	ns
Extent of Internationalisation	ns	ns	ns	2.754 .048	3.094 .031	ns	ns
Level of Gearing	ns	ns	ns	ns	ns	ns	ns

ns = not significant

Figure 7.09 - Current ratio by Activity



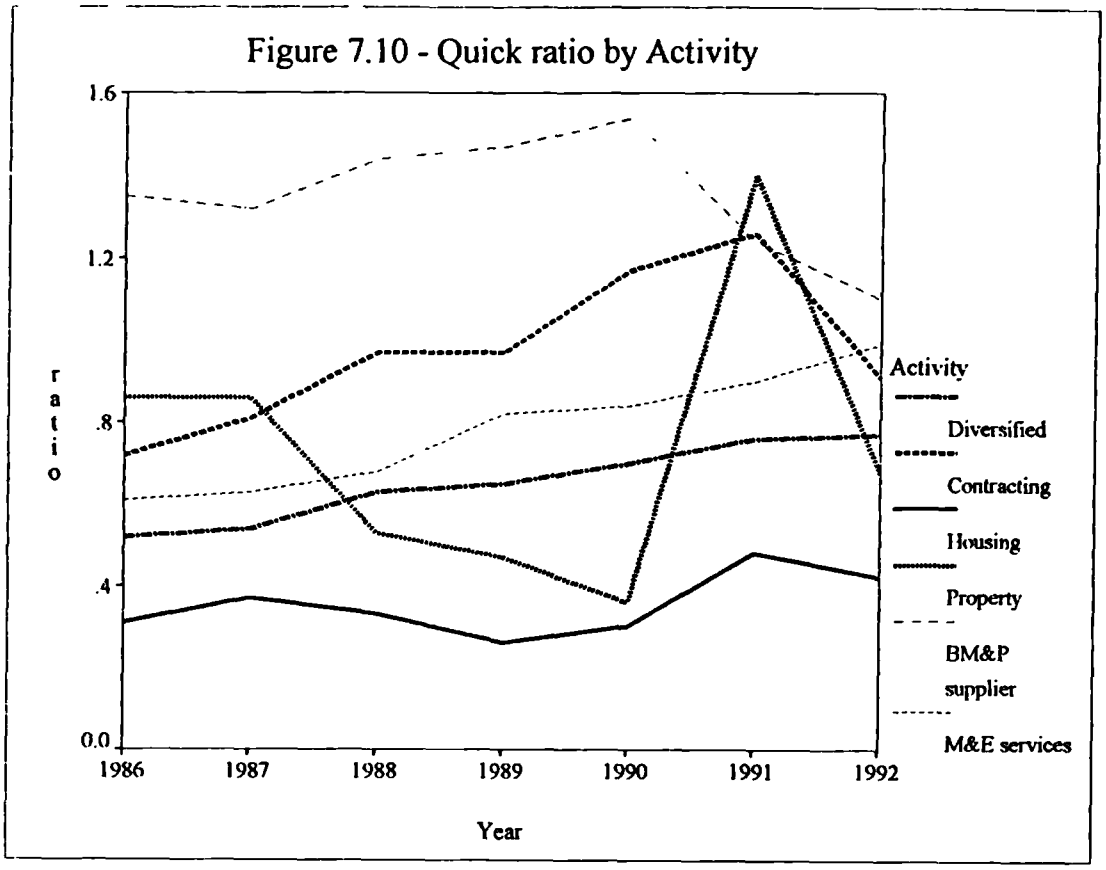
7.6.2.4 Quick Ratio

Quick ratio is another measure of a firm's liquidity. However, unlike current ratio it does not include stock and work in progress (as current assets). Therefore, it is a better indicator of a frim's cash position. The relationship between quick ratio and the competitive strategies are displayed in table 7.19. Turnover had a causal relationship in 1987 only. However, it was the type of activity that showed strong and continuous causal relationship with quick ratio. Figure 7.10 further describes the relationships between the type of activity and quick ratio. It is notable that the housing activity has the lowest value of quick ratio throughout the period at around 0.5. The quick ratio of the property activity fluctuates but higher than the quick ratio of the housing. Clearly the contracting activity generates the highest quick ratio and is followed by the diversified activity.

Table 7.19 - Analysis of Variance of Quick Ratio by Competitive Strategy [F value and Significance of F]

STRATEGIC GROUP	YEAR						
	1986	1987	1988	1989	1990	1991	1992
Turnover	ns	3.322 .033	ns	ns	ns	ns	ns
Type of Activity	5.005 .004	2.719	4.764 .003	7.250	2.767 .038	ns	3.338 .018
Extent of Diversification	ns	ns	ns	ns	ns	ns	ns
Extent of Internationalisation	ns	ns	ns	ns	ns	ns	ns
Level of Gearing	ns	ns	ns	ns	ns	ns	ns

ns = not significant



7.6.2.5 Turnover

Two competitive strategies, that are the extent of diversification and the extent of internationalisation show the strong and persistent relationships with turnover over the whole period of 1986-92 as demonstrated in table 7.20. However, it is the extent of internationalisation which has the stronger relationships with the F-values ranging from 7.046 to 28.715 and very high significance level at 0.000 constantly. Figure 7.11 shows the clear trends of the relationships between diversification and turnover. Highly diversified firms tend to generate the highest turnover while those which are not diversify tend to generate the lowest turnover. Figure 7.12 displays the similar trends which exist between turnover and the degree of internationalisation.

Table 7.20 - Analysis of Variance of Turnover by Competitive Strategy
[F value and Significance of F]

STRATEGIC GROUP	YEAR						
	1986	1987	1988	1989	1990	1991	1992
Turnover	na	na	na	na	na	na	na
Type of Activity	ns	ns	ns	2.730 .040	2.855 .034	ns	ns
Extent of Diversification	4.001 .017	3.003 .047	8.731 .000	9.992 .000	8.538 .000	ns	4.276 .013
Extent of Internationalisation	7.206 .000	9.962 .000	7.640 .000	17.706 .000	28.715 .000	10.144 .000	7.046 .000
Level of Gearing	ns	ns	12.910 .000	ns	ns	ns	ns

ns = not significant
na = not applicable

Figure 7.11 - Turnover by Diversification

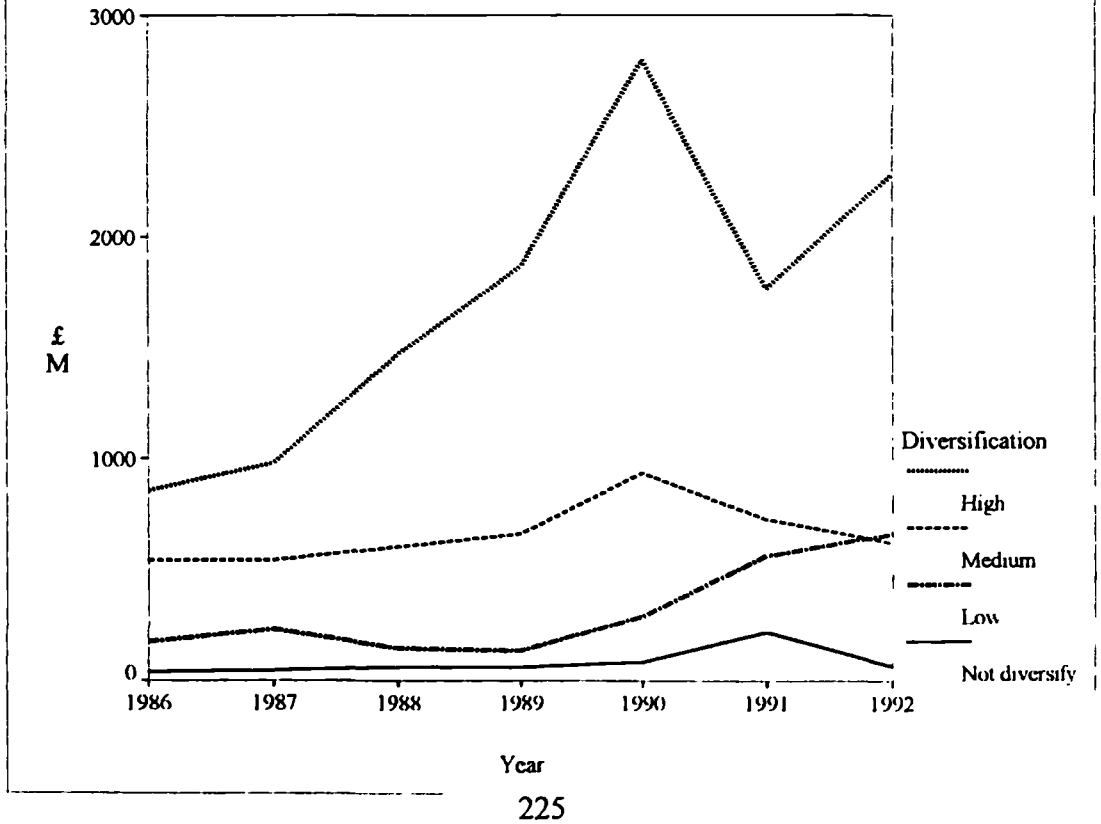
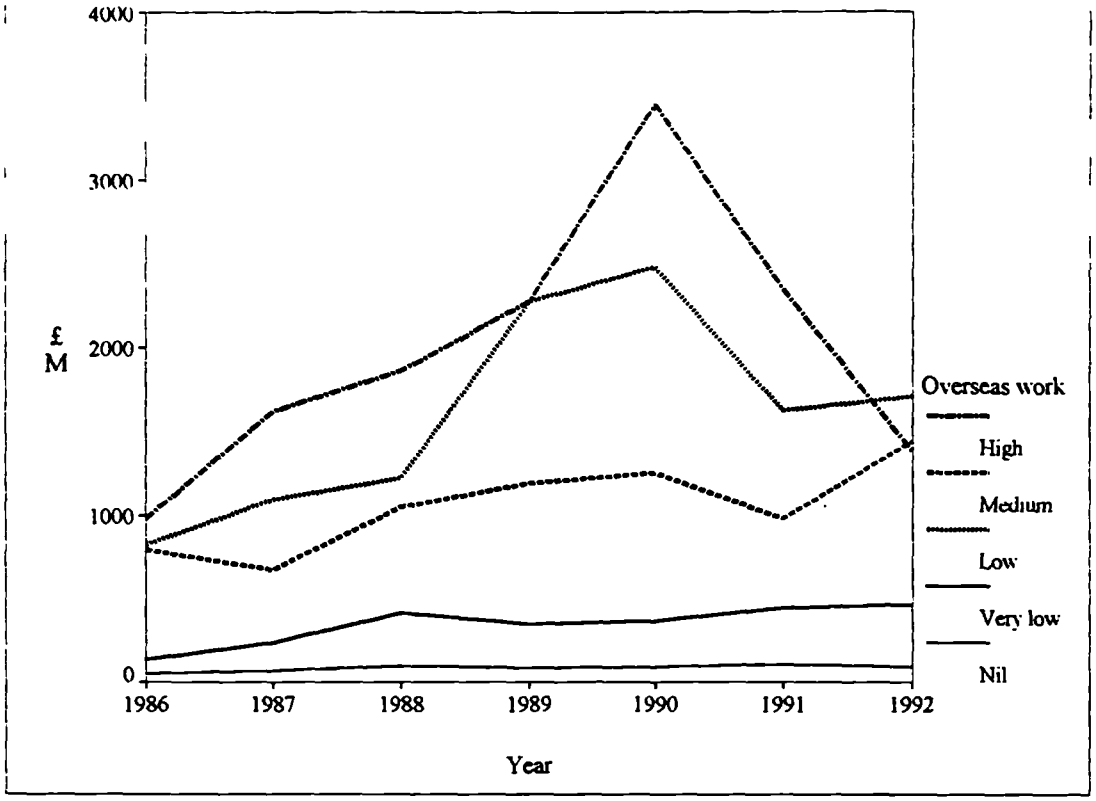


Figure 7.12 - Turnover by Internationalisation



Summary of Causal Relatioships

As a summary six main causal relationships have been found in the analyses that are:

(a) Level of gearing and ROCE

(b) Type of activity and ROCE;

(c) Level of gearing and ROSF;

(d) Type of activity and current ratio;

(e) Extent of diversification and turnover; and

(f) Extent of internationalisation and turnover.

Further discussion about the above findings will be continued in chapter 9.

CHAPTER 8

DATA ANALYSIS: PHASE 2

8.1 Introduction

This chapter will analyse the empirical results of the second phase of the study, that is an investigation into the appropriate construction firms' strategies in three different economic periods: (boom 1986-1989; recession 1990-1993; and future 1994-onward). The analysis will be divided into two stages: (1) frequency analysis; and (2) comparison of means. In the first stage, each variable will be analysed using frequency analysis and each of them will be presented as a bar chart. In the second stage, a mean value of each variable will be calculated and these mean values will then be compared with variables which are under the same heading. For instance, under the heading of direction strategy; internal expansion, acquisition, joint-venture and merger will be compared.

8.2 Questionnaire Response

The similar sample of the top 110 construction public limited companies was contacted and provided with a set of questionnaires. Unlike the first phase of this study, the response for the second phase was not satisfactory. Many firms replied negatively by returning the questionnaire unanswered. They were reluctant to participate mainly because they were too busy and had no time to spare on the questionnaire. In fact, that was a period (at the end of 1992) when most of the construction firms regardless of their size and type of activities were severely hit by the deep and continuous recession. Those who had not responded were reminded and given another set of questionnaires. After the second attempt, a total of 22 firms has responded positively. Even though the number of respondents was quite small, it was sufficient to be used as an indicator to show the trends in the industry.

8.3 Frequency Analysis

Initially, the chi-square test was considered to be used for the purpose of statistical inferences. However, there was no specific expected frequency patterns which could be used as the basis to compare the observed frequency, which was needed in the chi-square test. Therefore, the chi-square test was considered as not appropriate. Since the nature of the research was more on investigating the trends, frequency analysis was chosen to be used to describe the data. The purpose of frequency analysis was to show the trends of the perception of the construction firms on strategic issues in three different economic periods. For the past period [boom period (1986-89) and recession period (1990-93)], the respondents should give their answers based on past experience or performance. However, they should give their answers based on their own judgment and prediction for the future that is 1994 and onward. Therefore each variable would have three analyses to represent the trends of the three periods, i.e., boom (1986-1989), recession (1990-1993) and future (1994-onward).

The respondents were asked to give their perceptions for each variable in terms of experience, performance or perceptions according to the following scale:

1 Not at all important 2 Not important 3 Quite important 4 Very important 5 Extremely important

The frequency analysis was performed according to the following strategies:

1. Directional;
2. Method;
3. Generic;
4. Diversification;
5. Internationalisation;
6. Functional;
7. Resources;

8. Financial Performance Measurement;
9. Profit Determinants;
10. Loss Determinants; and
11. Strategic Management Practice;

8.3.01 Directional strategies

Directional strategies had three options that were expansion, retrenchment and status-quo. Each option will be described separately here. The comparison among these options will be given in the second stage of this analysis.

8.3.01.1 Expansion

Expansion or growth was clearly the most favoured direction during the boom period as shown in figure 8.001. Eight firms stated that it was extremely important and nine firms stated that it was very important. The remaining four firms regarded that it was quite important. There was only one firm which rated expansion as not important in that period.

During the recession, the trend was swung to the left which means that expansion became not important (refer figure 8.002). Ten firms regarded expansion as not at all important. The other six firms also considered that it was not important. There were two firms which agreed that it was quite important. However, three firms believed that expansion was still very important and one firm even believed that it was extremely important. As a whole, the trend during the recession was in the opposite direction compared to the trend during the boom period.

The future perception upon expansion strategy was quite different from the previous ones as demonstrated in figure 8.003). Most of the respondents (nine firms) stay at the middle which means that it was quite important. Seven firms consider that it was very important and three firms gave the highest rate as extremely important. However, there was one firm which regarded expansion as not important

and two firms regarded that it was not at all important. The trend was more like the trend during the economic up-turn but with a slightly different pattern. The trend indicated that the respondents had greater caution in their expansion programme after the recession.

8.3.01.2 Retrenchment

Figure 8.004 clearly shows that retrenchment is not at all important during the boom period. Twenty firms considered retrenchment as not at all important and the other two firms regarded retrenchment as not important. However, the pattern was changing during the recession as shown in figure 8.005. Six firms said that it was not at all important whilst the other six firms said that it was extremely important. Two firms believed that retrenchment as not important. However, three firms regarded this strategy as quite important and four other firms regarded it as very important. As far as the future is concerned, the trend is similar to that of the boom period (refer figure 8.006). However, there is a slight difference in terms of the frequency values.

8.3.01.3 Status-quo

In the boom period, status-quo was regarded as not important as displayed in figure 8.007. There was only one firm which considered that status-quo was extremely important. Three firms conceived that status-quo was quite important. However, thirteen firms believed that it was not at all important and five firms also believed that it was not important. During the period of recession, this strategy became more important as shown in figure 8.008. Seven firms regarded status-quo as very important whilst the other three firms regarded this strategy as extremely important. The number of firms which regarded this strategy as not at all important was reduced to eight. For the future, the overall trend could be generalised as quite similar to the trend of the boom period with slightly different frequency values (refer figure 8.009).

Figure 8.001 - Expansion in Boom

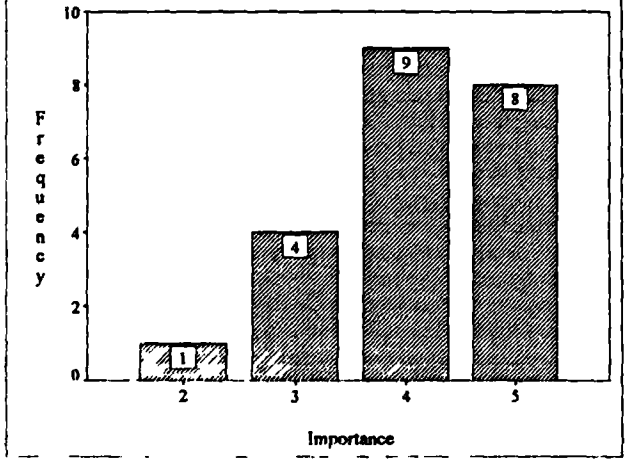


Figure 8.002 - Expansion in Recession

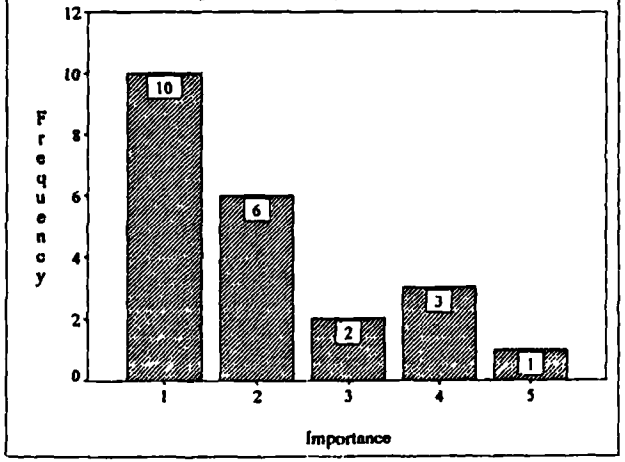


Figure 8.003 - Expansion in Future

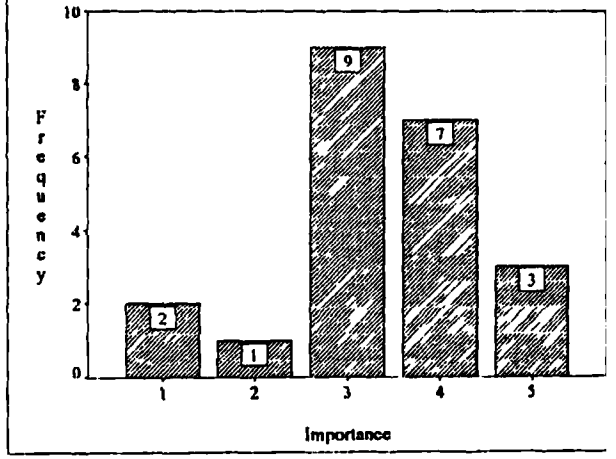


Figure 8.004 - Retrenchment in Boom

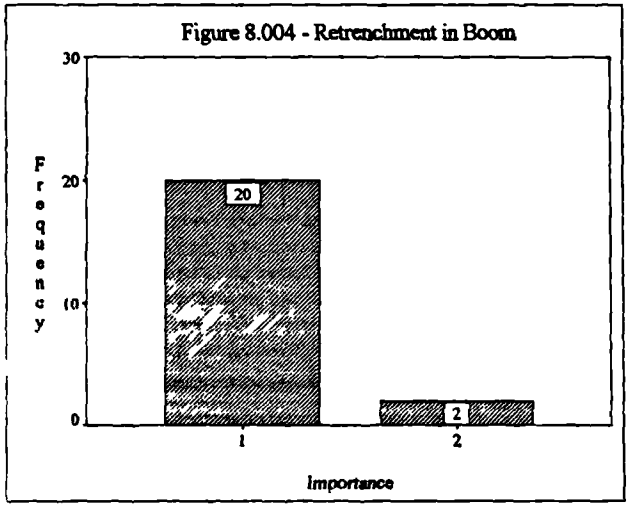


Figure 8.005 - Retrenchment in Recession

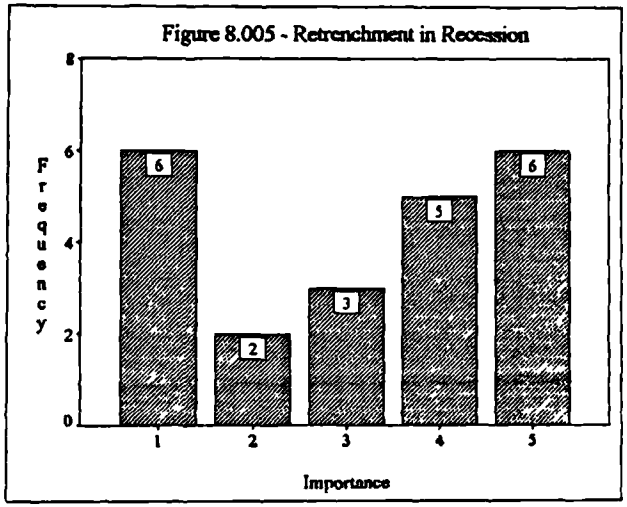
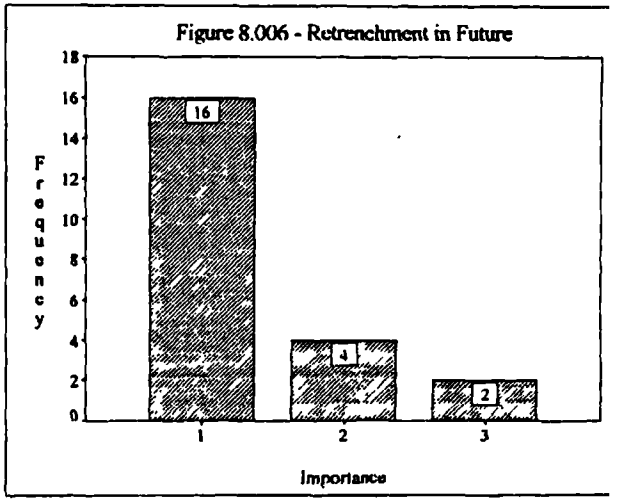


Figure 8.006 - Retrenchment in Future



8.3.02 Method Strategy

Method strategy has four options that are internal expansion, acquisitions, mergers and joint venture.

8.3.02.1 Internal expansion

Figure 8.010 clearly displays that internal expansion was the most favoured strategic methods during the boom period. Four firms believed that it was quite important. Nine firms considered this strategy as very important and the other nine firms thought that it was extremely important. In recession the frequency pattern was changing as demonstrated in figure 8.011. Seven firms rated this strategy as not at all important whilst on the other end six firms still believed that it was extremely important. The other nine firms were equally distributed at the middle of the scale. Figure 8.012 displays that internal expansion is virtually the most important method in future. Fourteen firms considered that it was extremely important. Four firms believed that it was very important and the other four thought that it was quite important.

8.3.02.2 Acquisition

There is no clear pattern in the frequency analysis of acquisition strategy in the boom period as shown in figure 8.013. However, there is one firm which considered that acquisition was extremely important. Five firms believed that it was very important and another six considered that it was quite important. In the recession, the frequency pattern became more obvious that this strategy was not important as shown in figure 8.014. For the future, the perception of the respondents was similar to that for the boom period (refer figure 8.015). The pattern for the future indicated that the respondents were slightly cautious about their acquisitions for expansion.

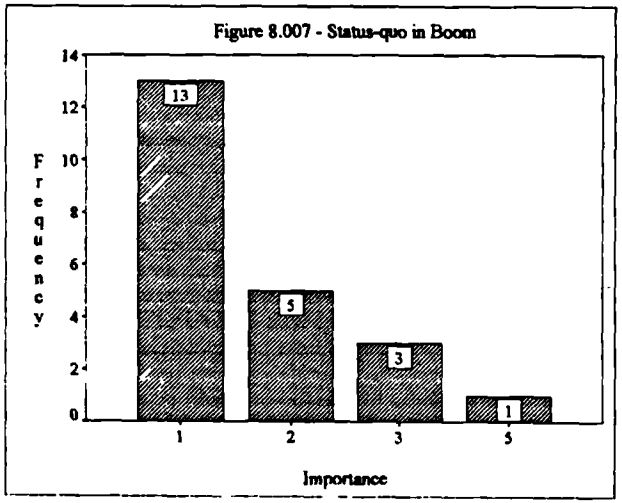


Figure 8.007 - Status-quo in Boom
Frequency
14
12
10
8
6
4
2
0
13
5
3
1
1
2
3
5
Importance

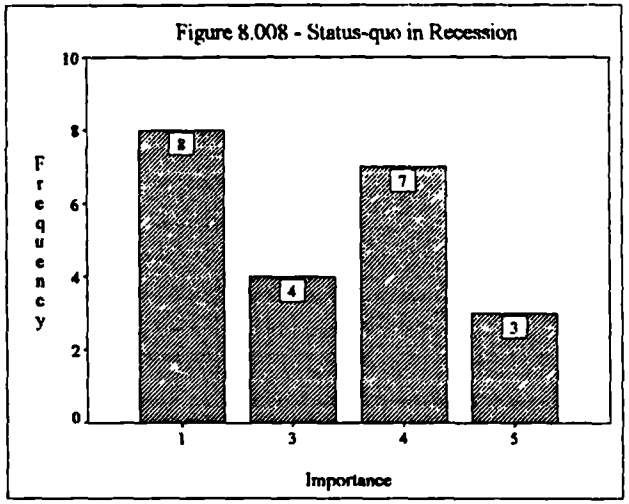


Figure 8.008 - Status-quo in Recession
Frequency
10
8
6
4
2
0
8
4
7
3
1
3
4
5
Importance

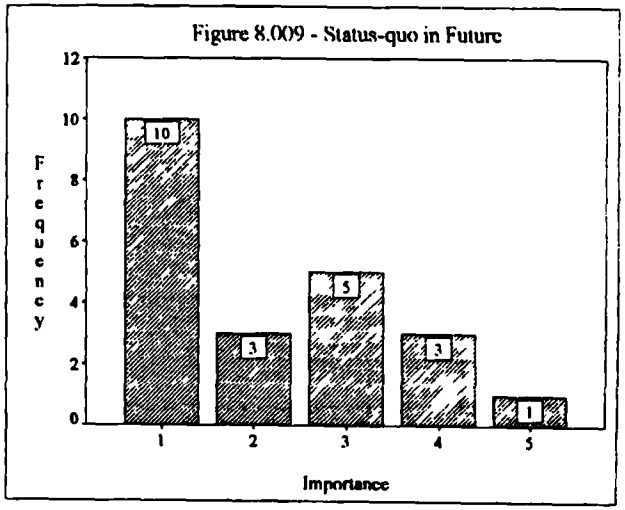


Figure 8.009 - Status-quo in Future
Frequency
12
10
8
6
4
2
0
10
3
5
3
1
1
2
3
4
5
Importance

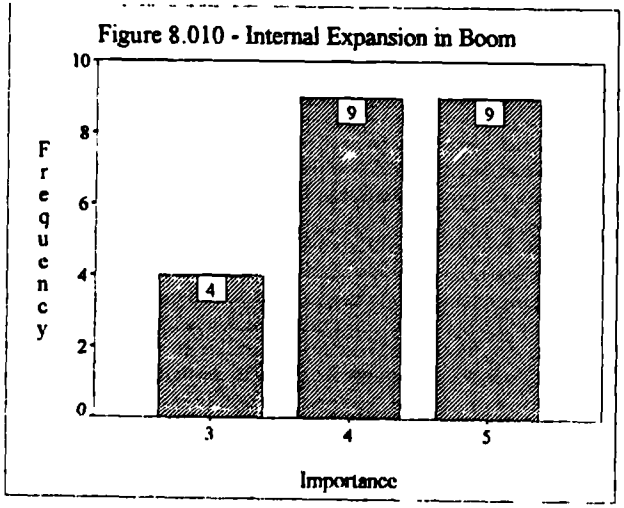


Figure 8.010 - Internal Expansion in Boom
Frequency
10
8
6
4
2
0
4
9
9
3
4
5
Importance

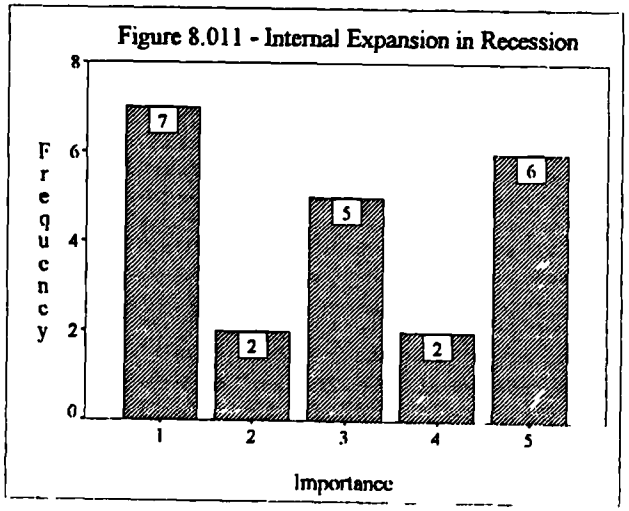


Figure 8.011 - Internal Expansion in Recession
Frequency
8
6
4
2
0
7
2
5
2
6
1
2
3
4
5
Importance

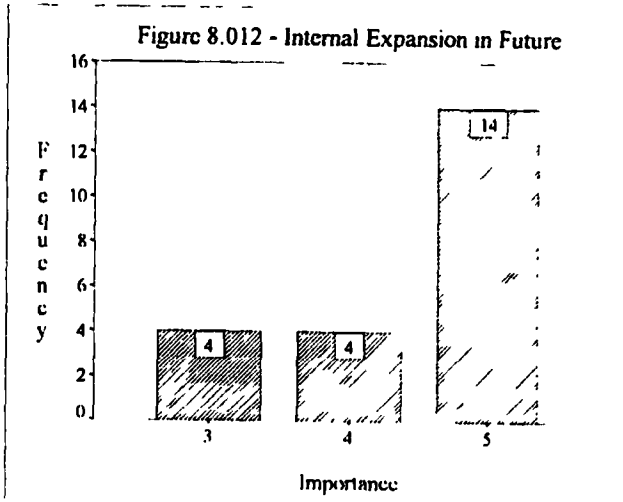


Figure 8.012 - Internal Expansion in Future
Frequency
16
14
12
10
8
6
4
2
0
4
4
14
3
4
5
Importance

8.3.02.3 Merger

The frequency analysis of merger strategy during the boom and the recession was similar as demonstrated in figure 8.016 and 8.017. Eighteen firms considered that it was not at all important and three firms considered that it was not important. Only one firm thought that it was quite important. As far as the future was concerned the trend was not changing significantly as shown in figure 8.018.

8.3.02.4 Joint-venture

The frequency analysis of joint-venture analysis throughout the period was quite consistent as shown in figure 8.019, 8.020 and 8.021. In figure 8.019, nine firms considered that it was quite important and only one firm believed that it was extremely important. However, in figure 8.020 and 8.021, the frequency values are more evenly distributed. This pattern means that the industry has been equally divided in their perception of the importance of this strategy.

8.3.03 Generic Strategy

Generic strategy consists of three strategies: focus on core business; reduce fixed cost and overhead; and offer financial packages.

8.3.03.1 Focus on core business

Most of the firms considered that focus on core business was important throughout the three periods. In the boom period seven firms regarded this strategy as extremely important as displayed in figure 8.022. The number of firm which regarded that it was extremely important was up to twelve in the recession (see figure 8.023). However, for the future, this number was slightly down to ten (refer figure 8.024). Comparing the three periods, the industry considered that focus on core business was the most important generic strategy during the recession.

Figure 8.013 - Acquisition in Boom

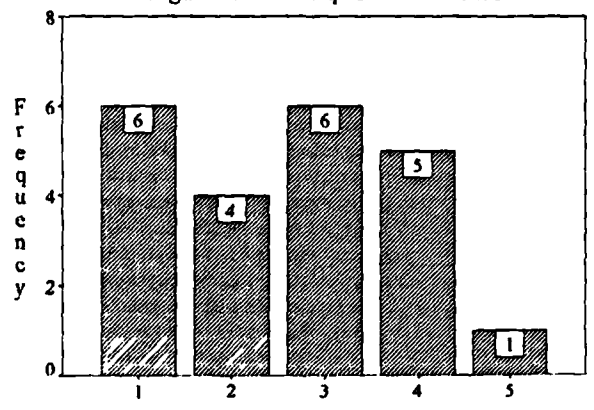


Figure 8.014 - Acquisition in Recession

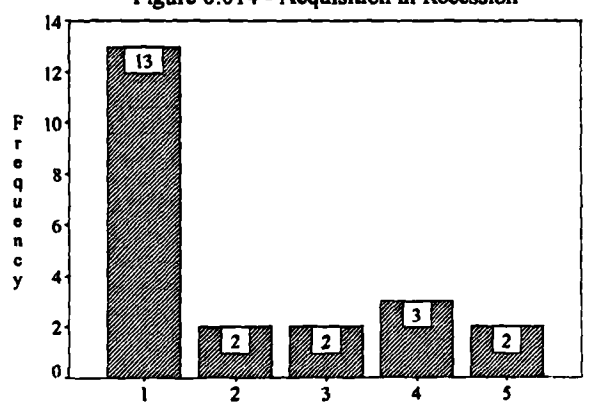


Figure 8.015 - Acquisition in Future

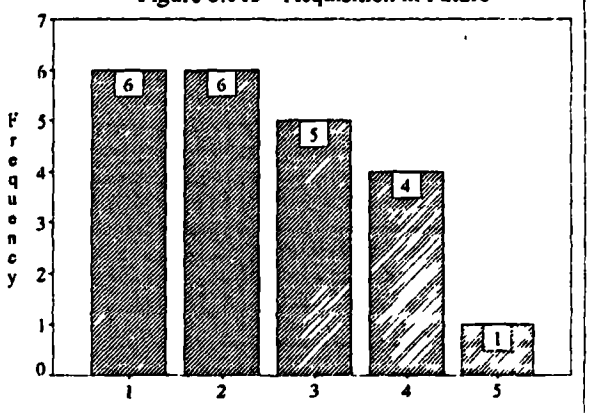


Figure 8.016 - Merger in Boom

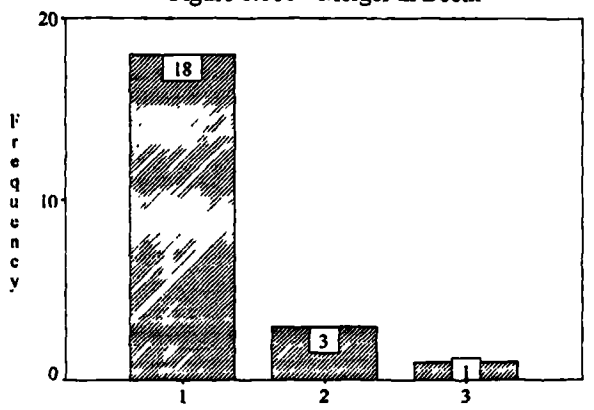


Figure 8.017 - Merger in Recession

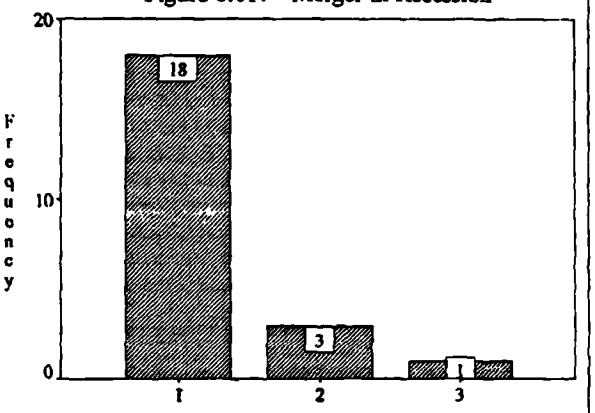


Figure 8.018 - Merger in Future

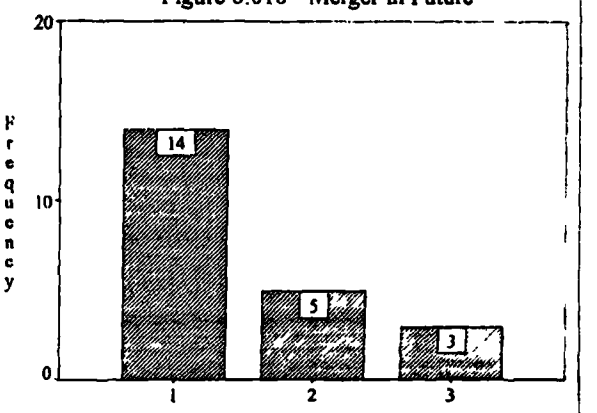


Figure 8.019 - Joint-venture in Boom

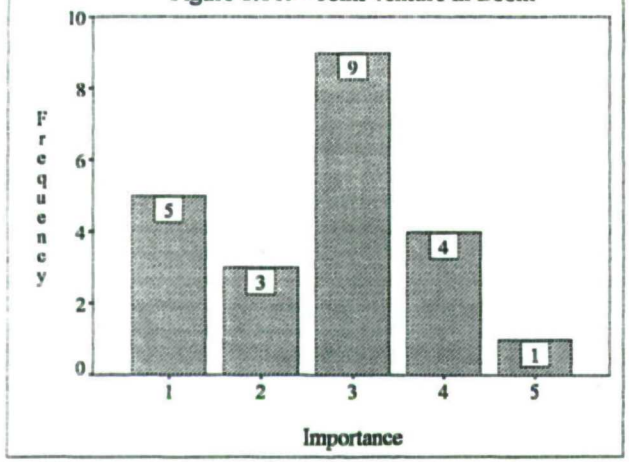


Figure 8.020 - Joint-venture in Recession

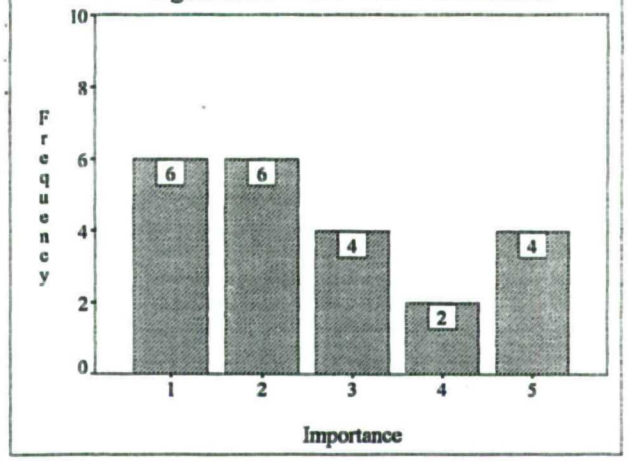


Figure 8.021 - Joint-venture in Future

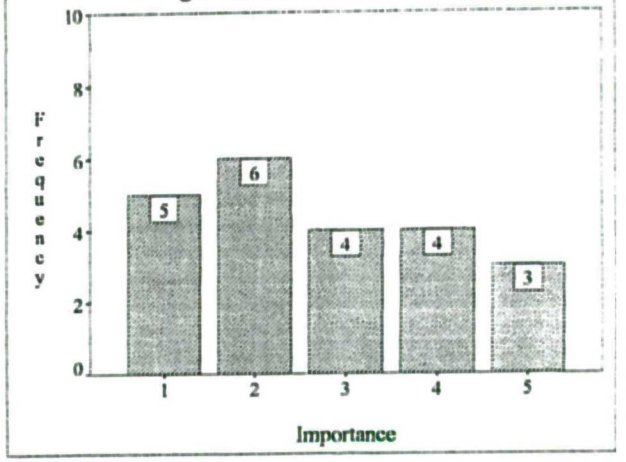


Figure 8.022 - Focus in Boom

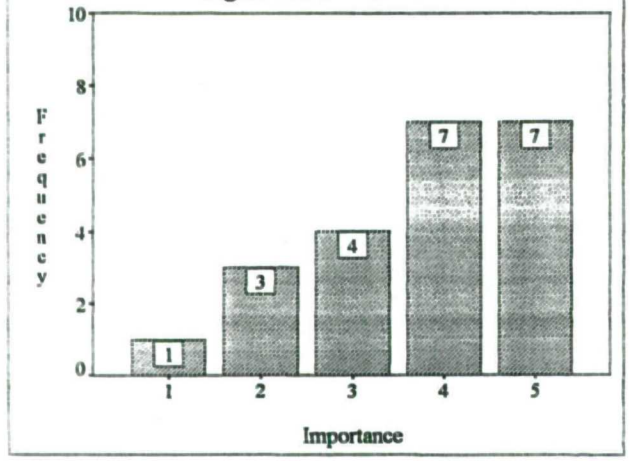


Figure 8.023 - Focus in Recession

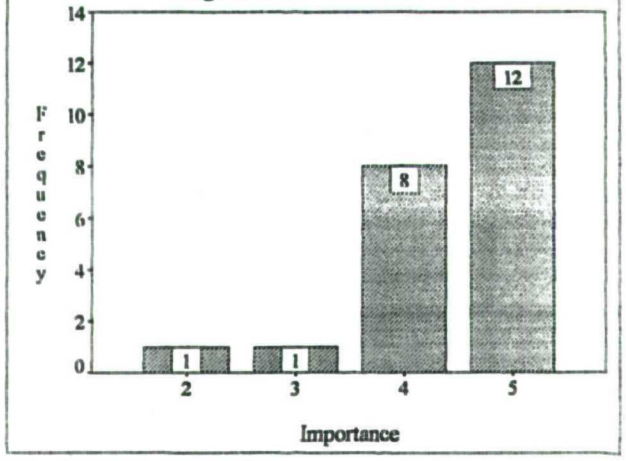
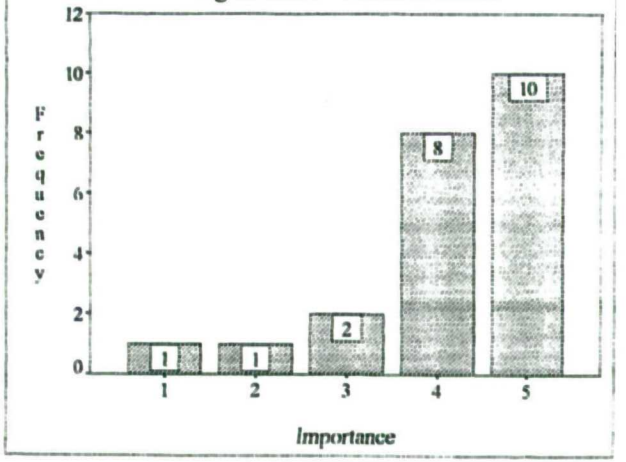


Figure 8.024 - Focus in Future



8.3.03.2 Reduce Fixed Costs and Overheads

It was surprising to acknowledge that the majority of the firms considered that reduce fixed costs and overheads as not important during the boom period (refer figure 8.025). Six firms stated that it was not at all important and eight stated that it was not important. However, this pattern was totally changed during the recession when all of the firms considered that this strategy was either very important or extremely important as shown in figure 8.026. The pattern was slightly changed again for the future (see figure 8.027). One firm stated that it was not at all important. Nine firms believed that this strategy was quite important. The remaining firms considered that it was either very important or extremely important.

8.3.03.3 Offer Financial Packages

Offering financial packages might be one of the new strategies which became more important recently. During the boom period, it was not considered as important by the industry as depicted in figure 8.028. Twelve firms regarded that offering financial packages as a strategy was not at all important and there was no one who believed that it was extremely important. During the recession, those who believed that this strategy was not at all important had decreased to seven and two firms stated that it was extremely important as displayed in figure 8.029. For the future, the industry's perception was similar to the previous pattern during the recession (see figure 8.030).

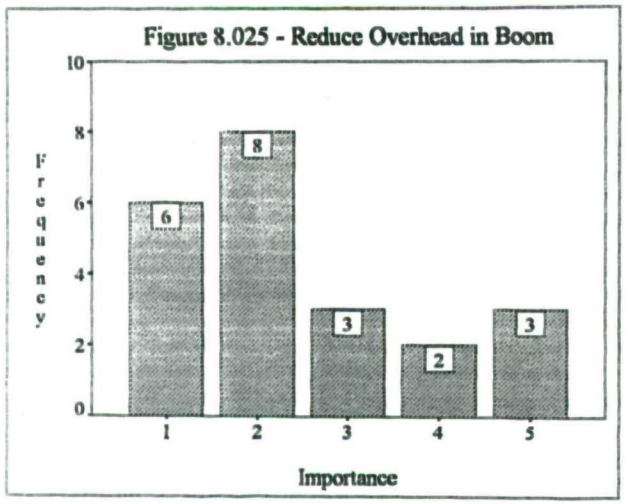


Figure 8.025 - Reduce Overhead in Boom
Frequency
Importance
6
8
3
2
3

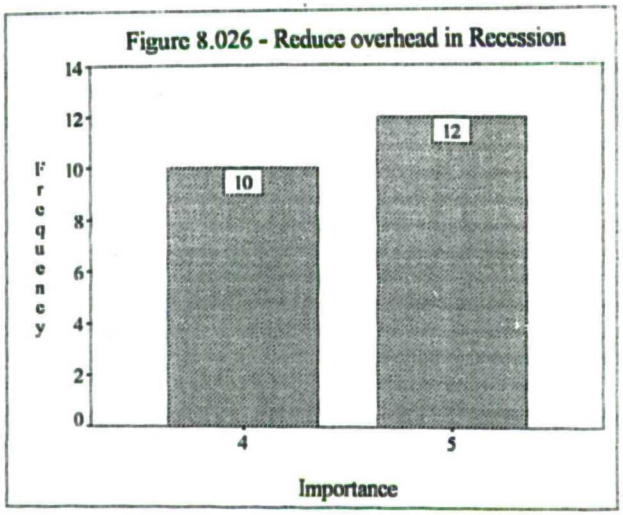


Figure 8.026 - Reduce overhead in Recession
Frequency
Importance
10
12

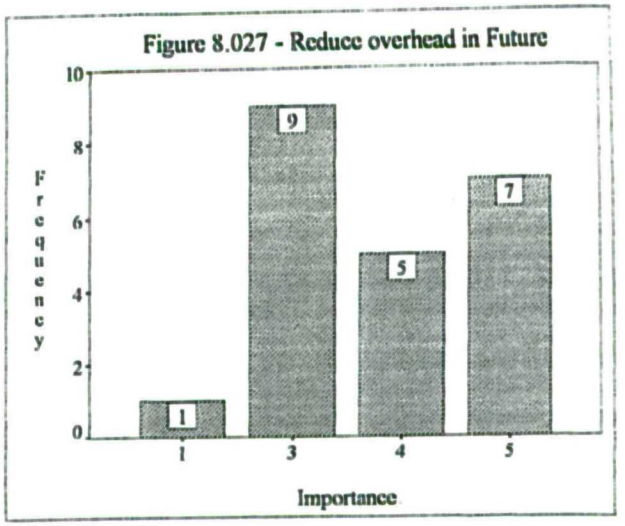


Figure 8.027 - Reduce overhead in Future
Frequency
Importance
1
9
5
7

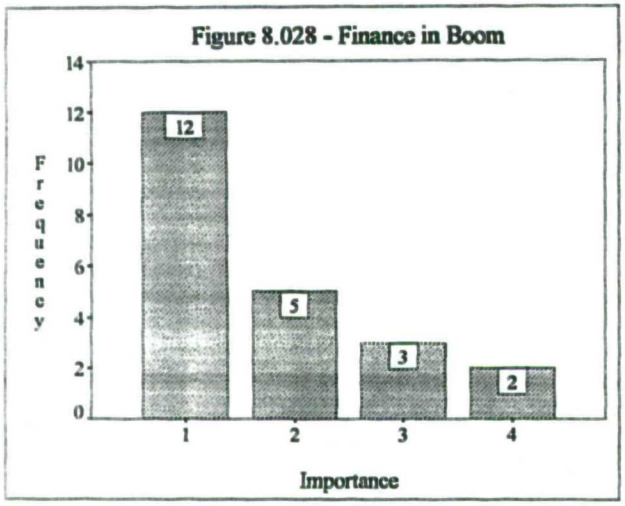


Figure 8.028 - Finance in Boom
Frequency
Importance
12
5
3
2

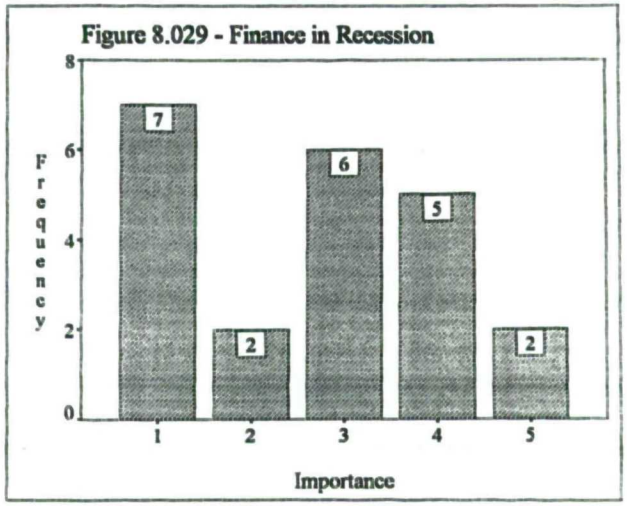


Figure 8.029 - Finance in Recession
Frequency
Importance
7
2
6
5
2

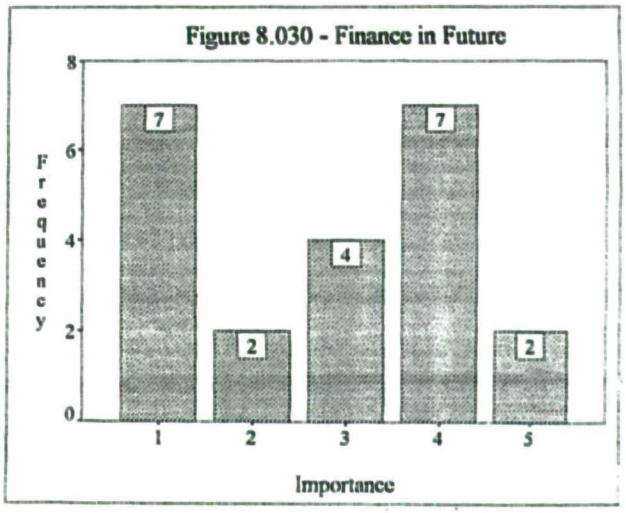


Figure 8.030 - Finance in Future
Frequency
Importance
7
2
4
7
2

8.3.04 Diversification Strategy

Diversification strategy has five major activities that are contracting, housing, property, other activities related to construction (e.g., building material supply, mechanical and electrical services, etc.) and other activities not related to construction (e.g., hotels, shipping, mining, etc.). It should be noted that the firms in the sample were already in the construction businesses. Therefore, diversification strategy was a means for these firms to grow based on the existing business activities.

8.3.04.1 Contracting

It can be seen in figure 8.031, 8.032 and 8.033 that the overall trends of this strategy in the three periods were not changed significantly. During the good economic period (see figure 8.031) eleven firms considered that it was not at all important. Five firms stated that it was very important and two firms stated that it was extremely important. In the period of recession (refer figure 8.032) ten firms believe that it was not at all important and four firms believe that it was not important. This pattern means that it was less important during the economic down-turn. For the future (refer figure 8.033) nine firms perceived that it was not at all important but three firms considered that it was extremely important. It can be seen that it became slightly more important for the future compared to the previous periods.

8.3.04.2 Housing

Figure 8.034 depicts the fact that housing was the most favoured activity during the economic boom. Eight firms stated that it was extremely important and six firms stated that it was very important. This pattern was significantly changed during the economic down-turn as presented in figure 8.035. In this period of recession, eleven firms considered that it was not at all important. The number of firms which

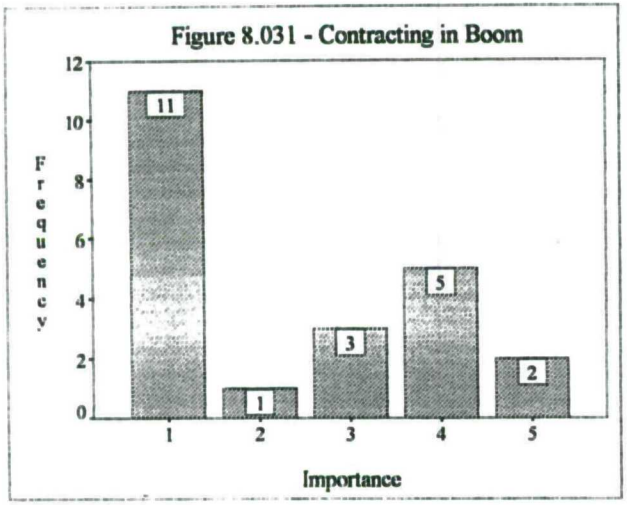


Figure 8.031 - Contracting in Boom
Frequency
Importance
11
1
3
5
2

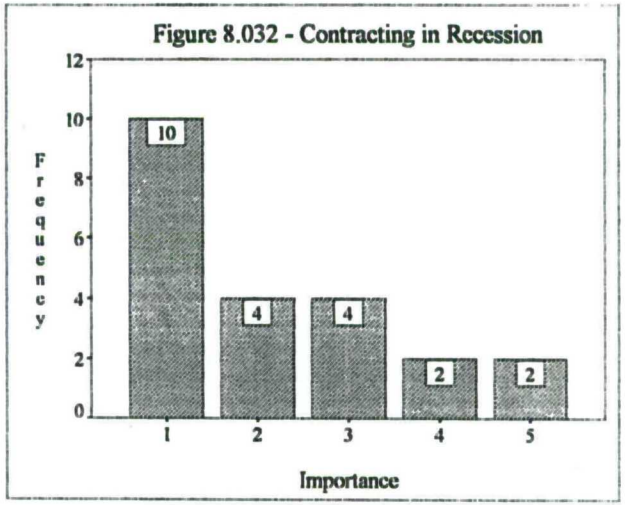


Figure 8.032 - Contracting in Recession
Frequency
Importance
10
4
4
2
2

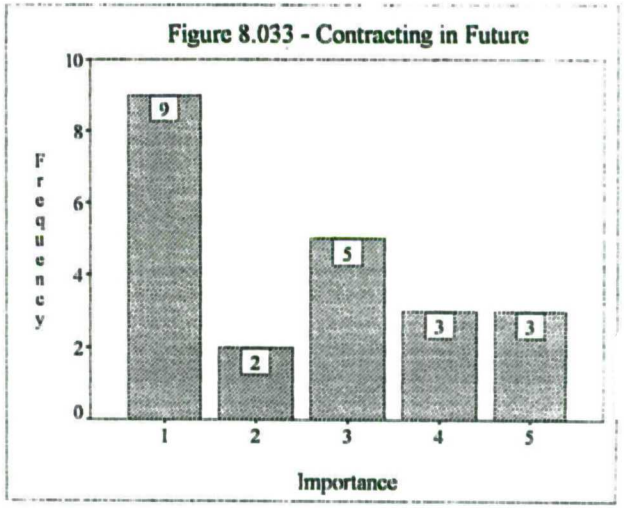


Figure 8.033 - Contracting in Future
Frequency
Importance
9
2
5
3
3

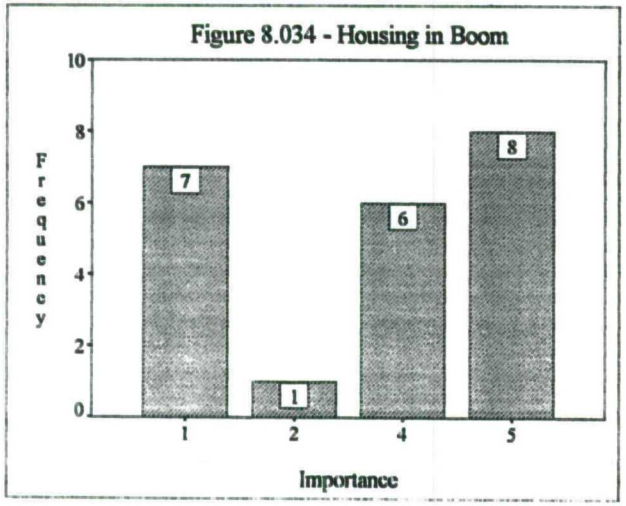


Figure 8.034 - Housing in Boom
Frequency
Importance
7
1
6
8

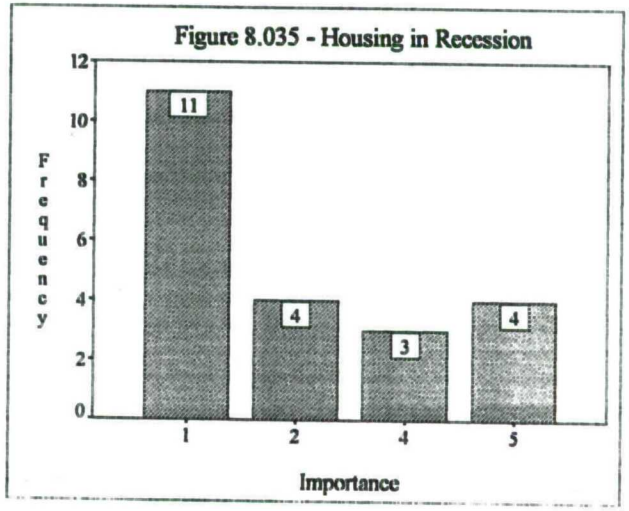


Figure 8.035 - Housing in Recession
Frequency
Importance
11
4
3
4

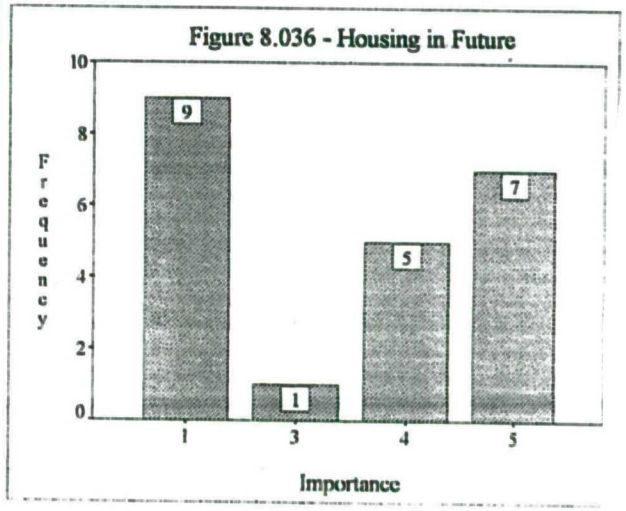


Figure 8.036 - Housing in Future
Frequency
Importance
9
1
5
7

regarded that it was extremely important decreased to four. For the future, the pattern would be similar to the one which was in the boom period as displayed in figure 8.036. It means that housing is still considered as the important activity for a firm's growth for the future.

8.3.04.3 Property

Property has a spectacular pattern throughout the period of study (as depicted in figures 8.037, 8.038 and 8.039). During the boom period, it was considered as either very important or extremely important by nine firms and three firms respectively (see figure 8.037). Three firms stated that it was quite important. There was only one firm which thought that it was not important and six firms regarded that it was not all important. However, this trend was dramatically changed in the period of recession (see figure 8.038). There was no firm which regarded that it was extremely important. On the other hand, fourteen firms stated that it was not at all important. This pattern remains for the future with slight changes (see figure 8.039). It can be said that the importance of property activity as a mean of growth has decreased tremendously within the three economic periods.

8.3.04.4 Other Activities Related to Construction

Figures 8.040, 8.041 and 8.042 show that with few exceptions most of the firms considered that other activities which are related to construction are not important. During the boom period, eighteen firms stated that it was not at all important as displayed in figure 8.040. In the period of recession, nineteen firms stated the similar importance as depicted in figure 8.041. As far as the future was concerned, sixteen firms believed that this activity was not at all important as shown in figure 8.042.

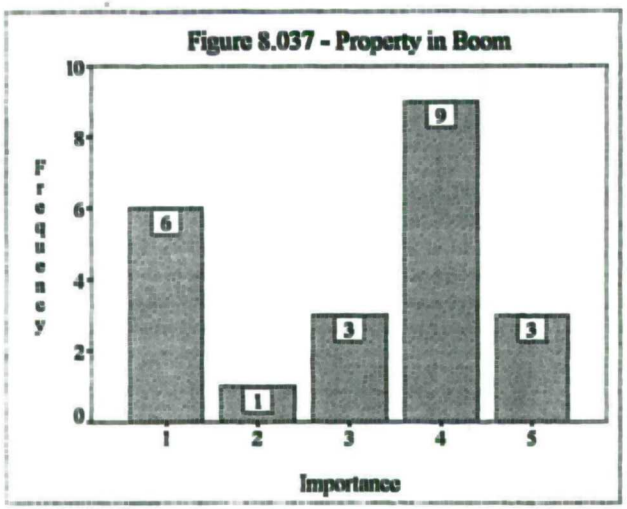


Figure 8.037 - Property in Boom
Frequency
Importance
6
1
3
9
3

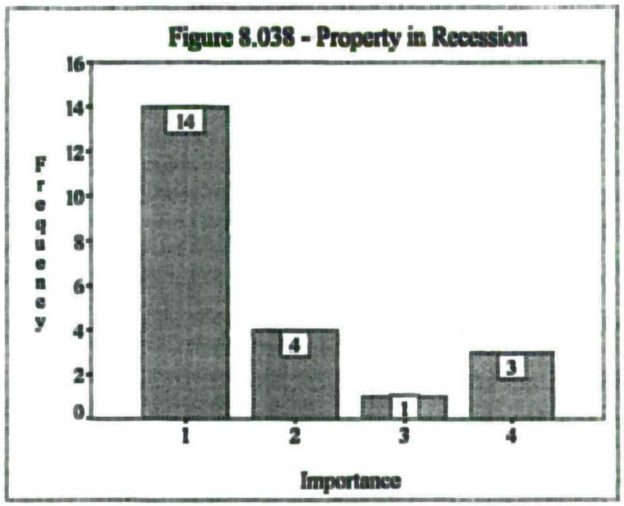


Figure 8.038 - Property in Recession
Frequency
Importance
14
4
1
3

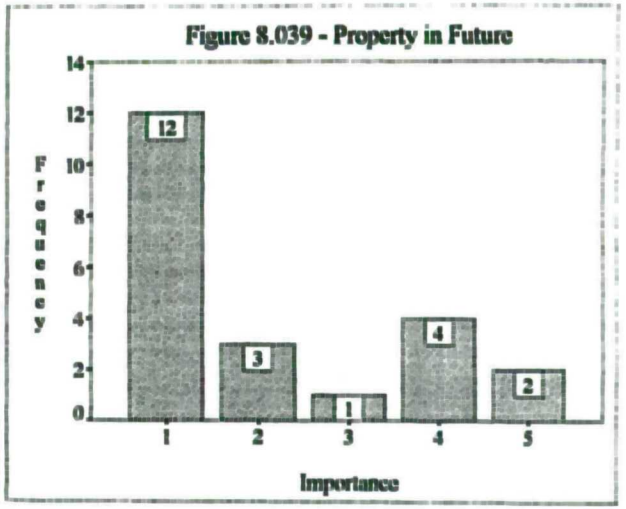


Figure 8.039 - Property in Future
Frequency
Importance
12
3
1
4
2

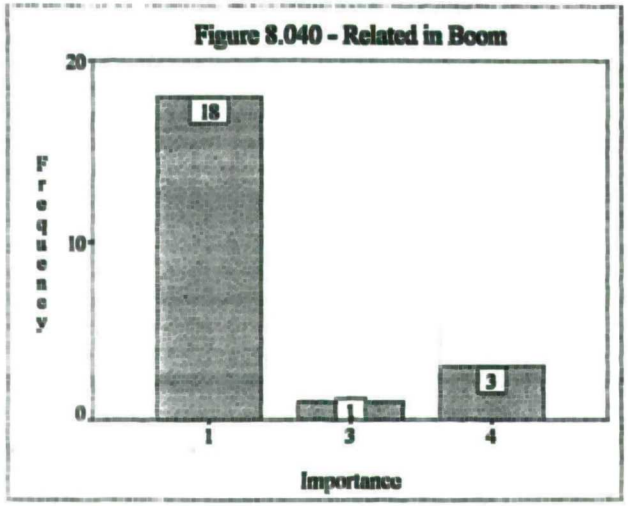


Figure 8.040 - Related in Boom
Frequency
Importance
18
1
3

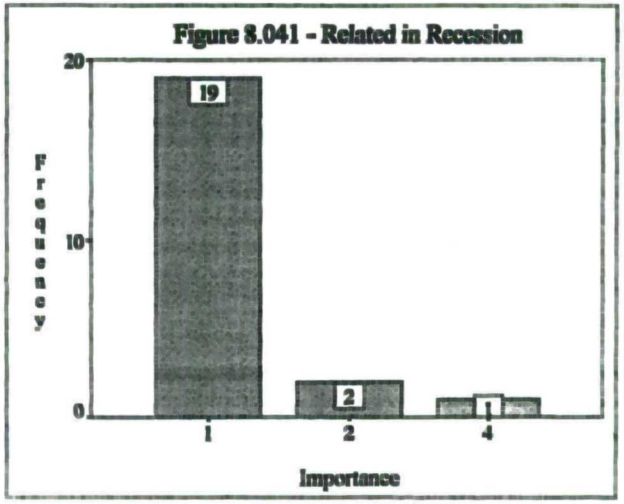


Figure 8.041 - Related in Recession
Frequency
Importance
19
2
1

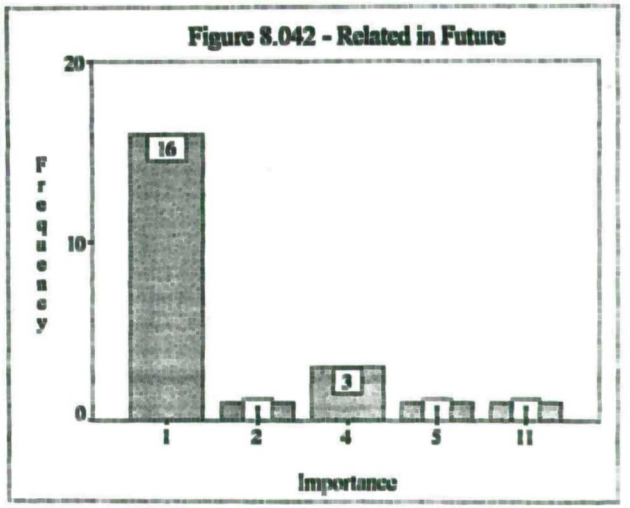


Figure 8.042 - Related in Future
Frequency
Importance
16
1
3
1
1

8.3.04.5 Other activities not related to construction

There is a very clear pattern which shows that this activity was considered not at all important by the industry as displayed in figure 8.043, 8.044 and 8.045. A slight change may be happening for the future when two firms stated that it was extremely important and one firm thought that it was very important.

8.3.05 Internationalisation Strategy

Internationalisation strategy covers six locations that are Europe, America, Asia, Africa, Middle East and other continents. For the purpose of this analysis, Europe has been regarded as one of the international markets even though it had become one single market by the end of 1992.

8.3.05.1 Europe

The formation of the single European market by the end of 1992 has no spectacular effect upon the perception of the construction industry on Europe as one of their markets. Figure 8.046 depicts the fact that fourteen firms considered that it was not at all important during the boom economic period. There was only one firm which stated that it was very important. In the period of recession this pattern had changed slightly as displayed in figure 8.047. For the future, five firms regarded that Europe was quite important (see figure 8.048).

Figure 8.043 - Unrelated in Boom

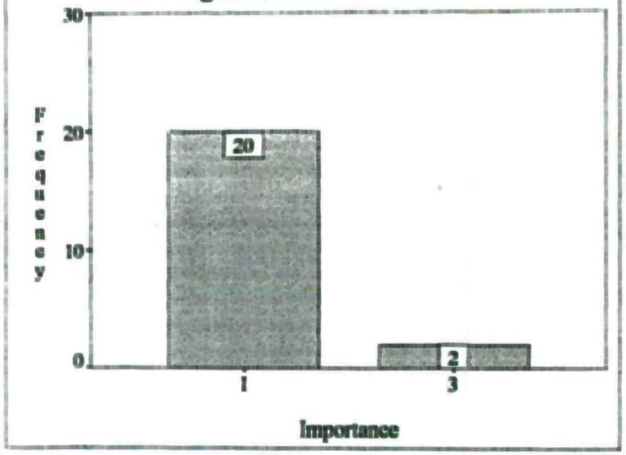


Figure 8.044 - Unrelated in Recession

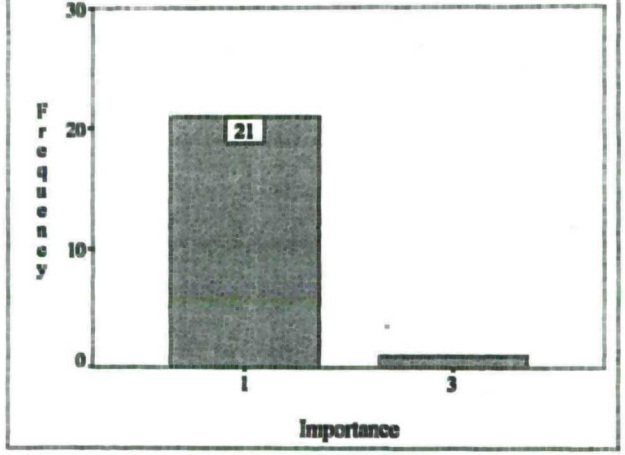


Figure 8.045 - Unrelated in Future

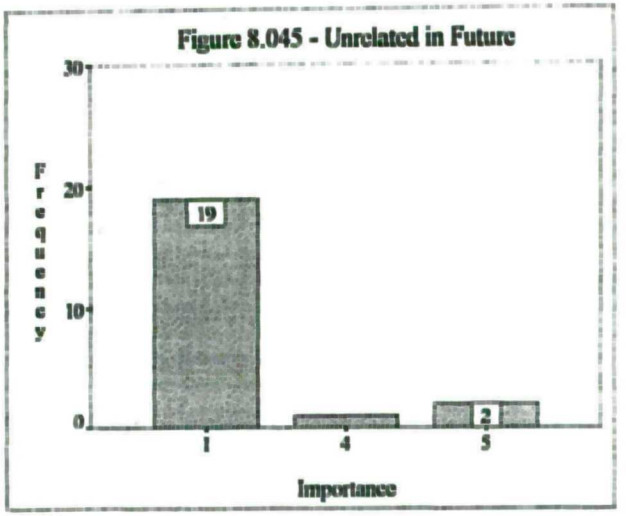


Figure 8.046 - Europe in Boom

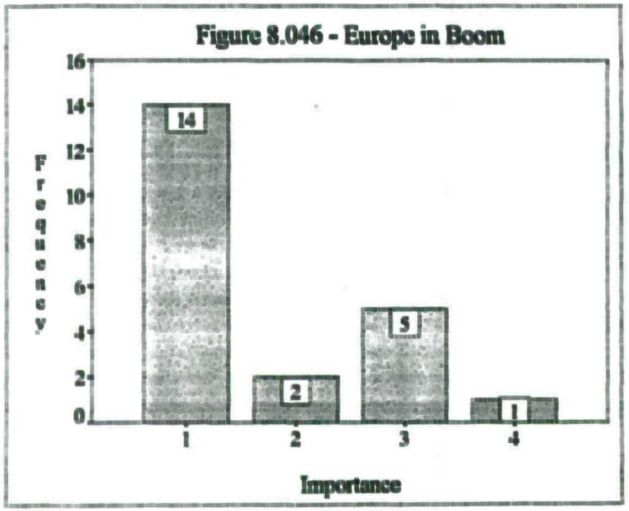


Figure 8.047 - Europe in Recession

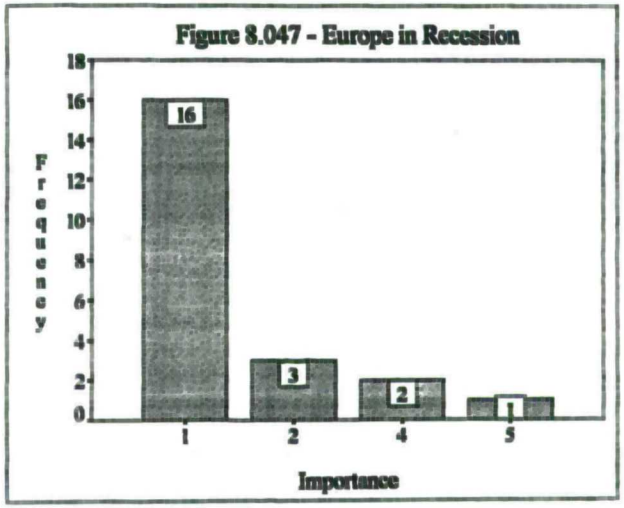
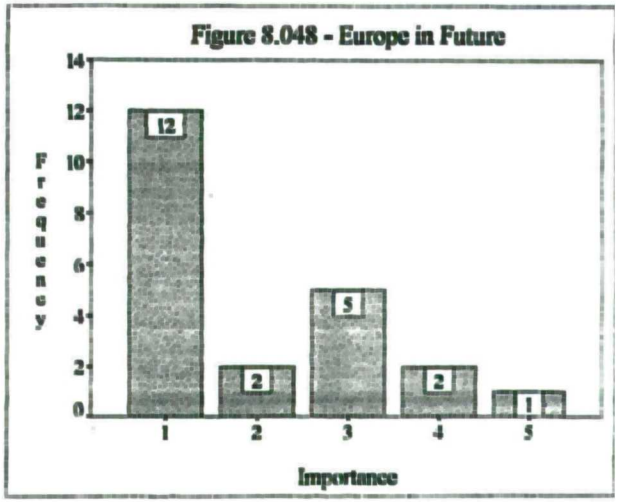


Figure 8.048 - Europe in Future



8.3.05.2 America

Figure 8.049 depicts that seventeen firms stated that America was not at all important for their internationalisation strategy during the boom. However, five firms considered that it was very important in the same economic period. When the economy turned-down, most of the firms believed that it was not at all important as presented in figure 8.050. There may be slight improvement for the future but it was regarded as less important than in the boom period (see figure 8.051). Throughout the three economic periods, the importance of America was tending to decrease.

8.3.05.3 Asia

Asia was considered as not important during the boom period (see figure 8.052). Twenty firms stated that it was not at all important. However, during the recession three firms considered that it was extremely important as displayed in Figure 8.053. For the future, two more firms regarded that Asia was quite important (see figure 8.054).

8.3.5.04 Africa

Figure 8.055 and 8.056 show that Africa was considered as not at all important to the firms. Only one firm stated that it was quite important. This pattern is likely to continue for the future with very minor improvement as depicted in figure 8.057.

8.3.5.05 Middle East

Middle East was also regarded as not at all important by the firms as displayed in figure 8.058, 8.059 and 8.060. During the economic boom, one firm stated that it was extremely important and three firms stated that it was quite important. There were slight changes during the economic down-turn and for the future.

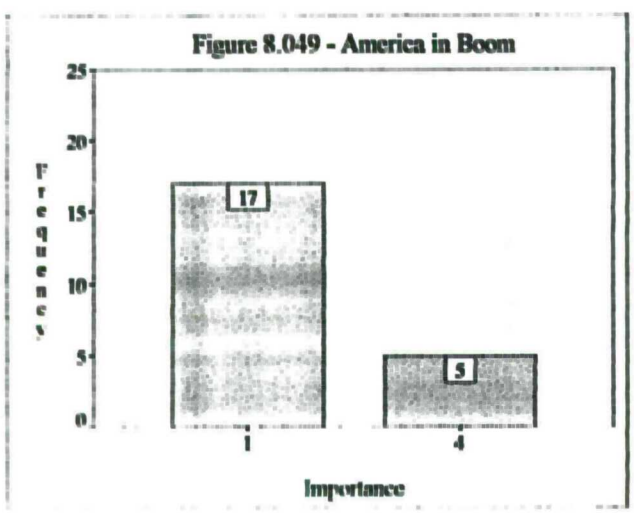


Figure 8.049 - America in Boom
Frequency
25
20
15
10
5
0
17
5
1
4
Importance

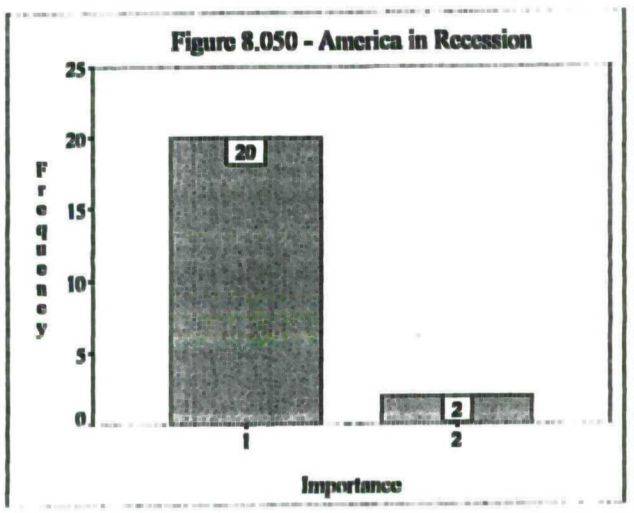


Figure 8.050 - America in Recession
Frequency
25
20
15
10
5
0
20
2
1
2
Importance

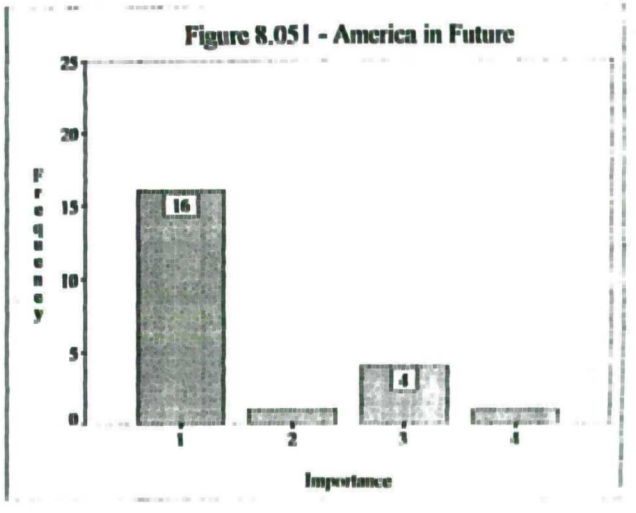


Figure 8.051 - America in Future
Frequency
25
20
15
10
5
0
16
4
1
2
3
4
Importance

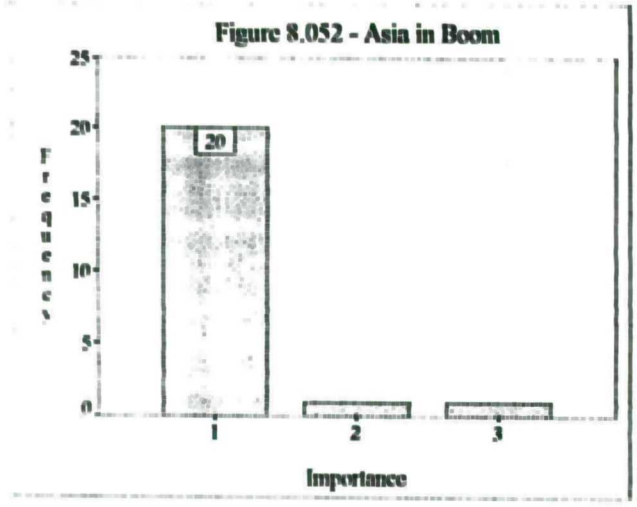


Figure 8.052 - Asia in Boom
Frequency
25
20
15
10
5
0
20
1
2
3
Importance

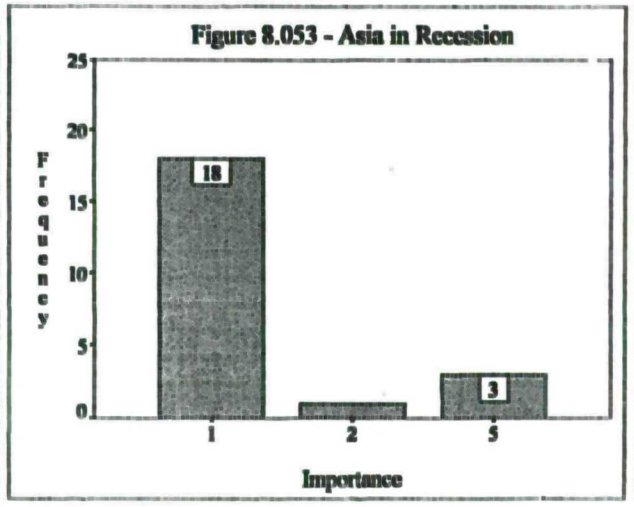


Figure 8.053 - Asia in Recession
Frequency
25
20
15
10
5
0
18
3
1
2
5
Importance

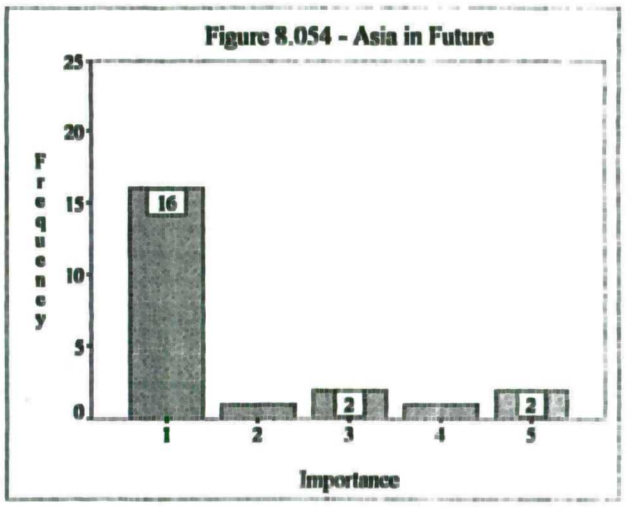


Figure 8.054 - Asia in Future
Frequency
25
20
15
10
5
0
16
2
2
1
2
3
4
5
Importance

Figure 8.055 - Africa in Boom

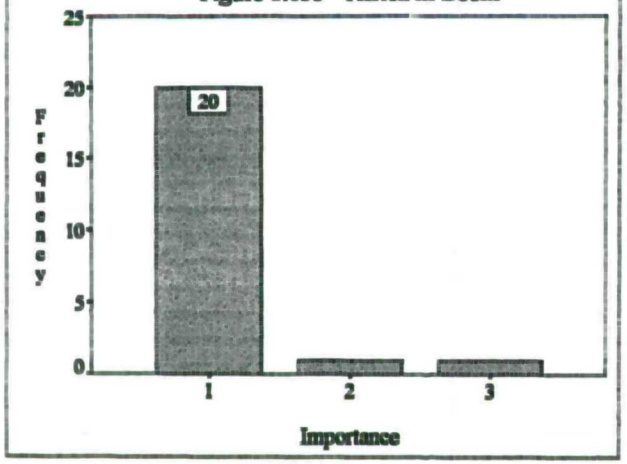


Figure 8.056 - Africa in Recession

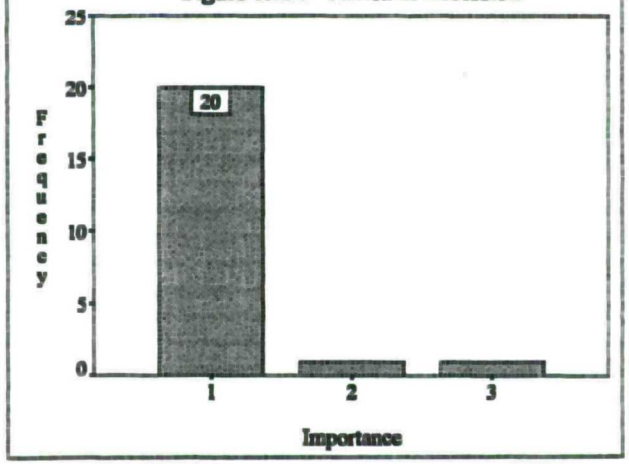


Figure 8.057 - Africa in Future

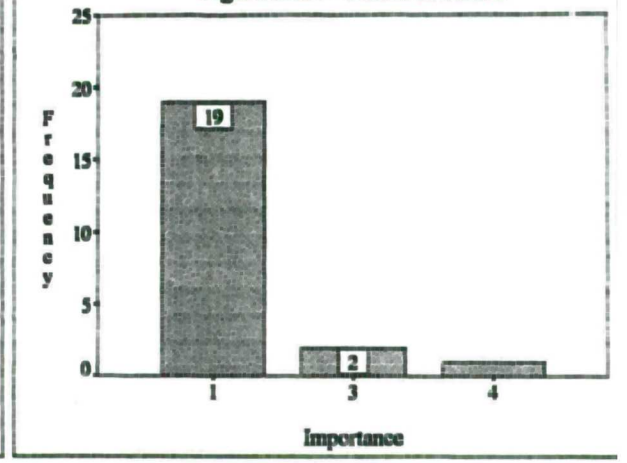


Figure 8.058 - Middle East in Boom

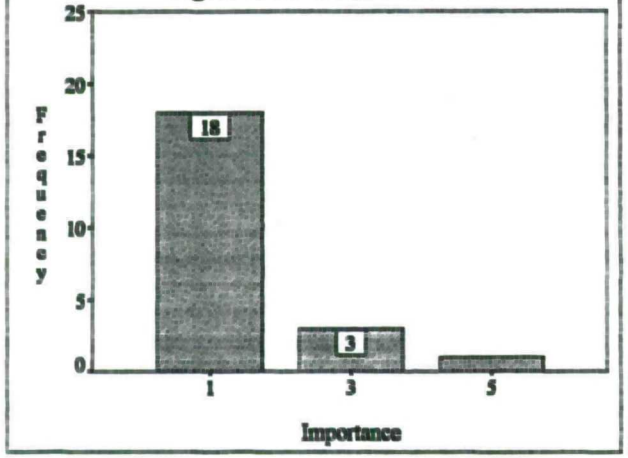


Figure 8.059 - Middle East in Recession

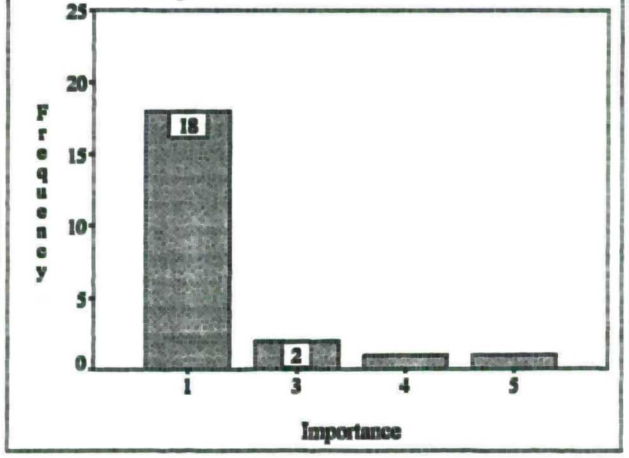
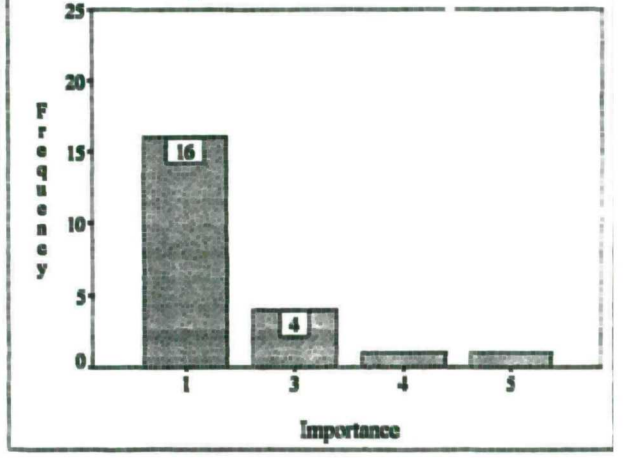


Figure 8.060 - Middle East in Future



8.3.05.6 Other continents

Twenty-one firms considered that other continents were not at all important for the whole three periods as presented in figure 8.061, 8.062 and 8.063. Only one firm regarded that it was very important in the past and it was extremely important for the future period.

8.3.06 Functional Strategy

Functional strategy composed of: using advanced technology, investing in R&D; and effective marketing.

8.3.06.1 Using advanced technology

It can be seen that there is a slow change in the perception of the industry in the use of advanced technology as depicted in figure 8.064, 8.065 and 8.066. Figure 8.064 shows that during the boom period fourteen firms are on the left side (which means not important), five firms are on the rights side (which means important) and three firms are in the middle (which means quite important). During the recession, this pattern was not changed significantly but there were many more firms in the middle position as displayed in figure 8.065. However, nine firms considered that this strategy was either very important or extremely important for the future whilst only five of them regarded that it was either not important or not at all important as shown in figure 8.066. This trend shows that the importance of using advanced technology probably will be increasing for the future.

Figure 8.061 - Other Continent in Boom

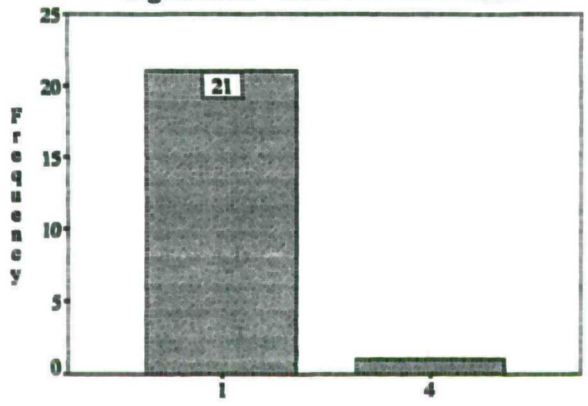


Figure 8.062 - Other Continent in Recession

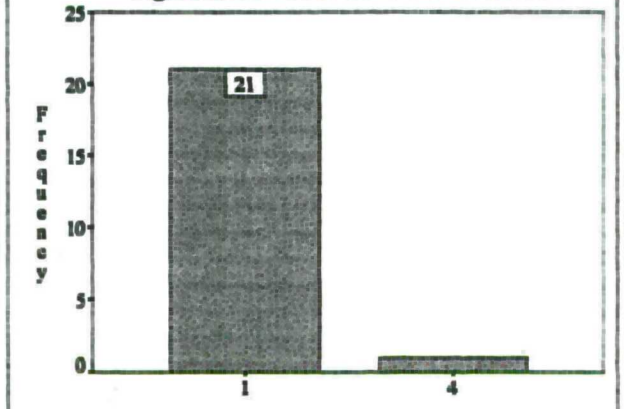


Figure 8.063 - Other Continent in Future

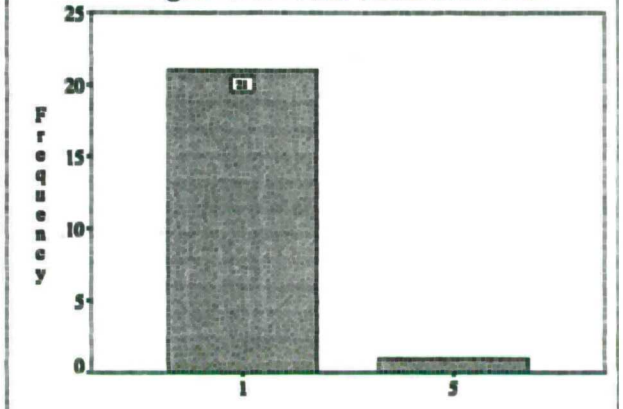


Figure 8.064 - Technology in Boom

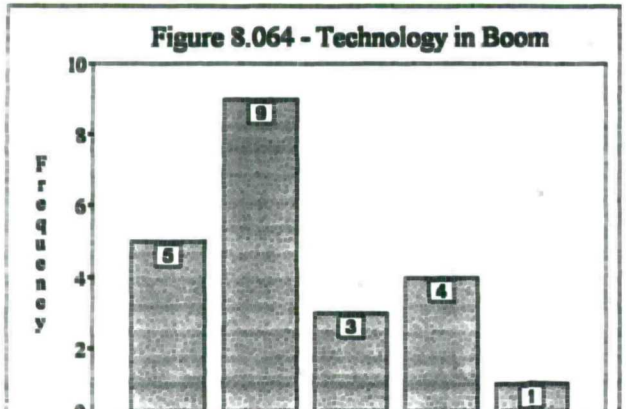


Figure 8.065 - Technology in Recession

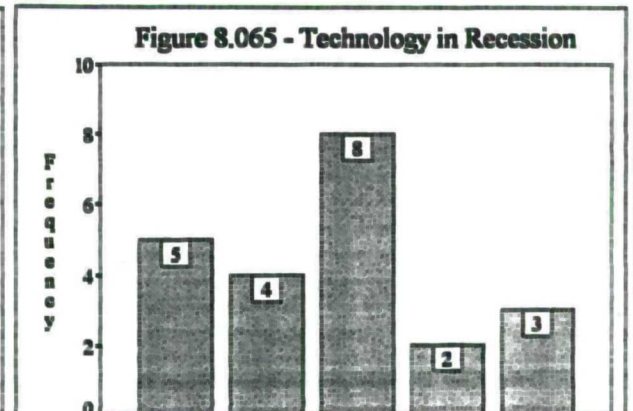
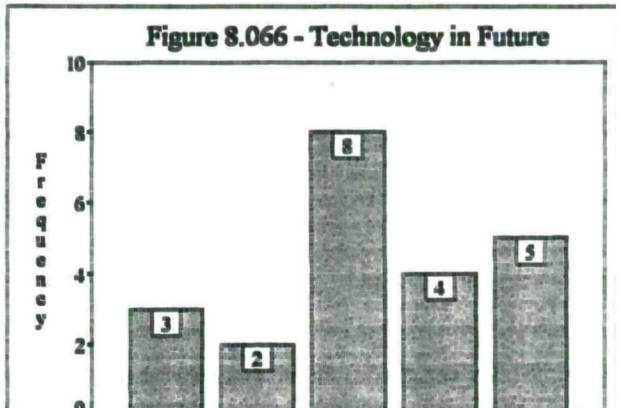


Figure 8.066 - Technology in Future



8.3.06.2 Research and development

Figure 8.067 depicts that research and development strategy was not important during the boom period. There were only two firms which considered that it was very important and seven firms which regarded that it was quite important. During the recession, four firms stated that research and development was very important and five firms believed that it was quite important as displayed in figure 8.068. Actually there was not much difference in the trends of these two periods. However, this strategy was considered to be somewhat more important for the future as demonstrated in figure 8.069. At least two firms believed that it was extremely important and another three firms thought that it was very important.

8.3.06.3 Marketing

During the period of the boom period the firms' perception on effective marketing was still mixed between important and not important as shown in figure 8.070. However, this trend changed dramatically during the period of recession as depicted in figure 8.071. Eight firms regarded that it was extremely important. For the future, this strategy was considered to be even more important. Figure 8.072 clearly shows that thirteen firms perceived that it would become extremely important.

8.3.07 Resource Strategy

Resource strategy included management, skilled workers, cash from borrowing, cash from rights issues, own plant and land banks.

Figure 8.067 - R&D in Boom

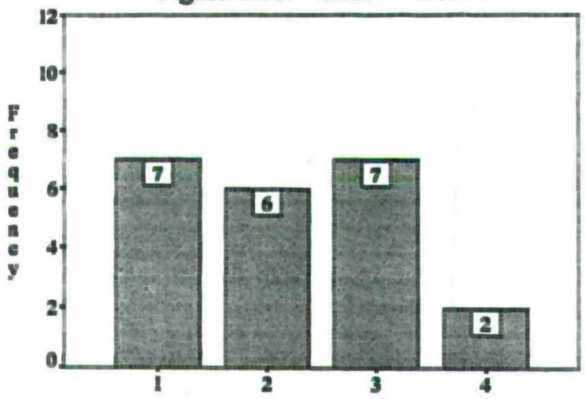


Figure 8.068 - R&D in Recession

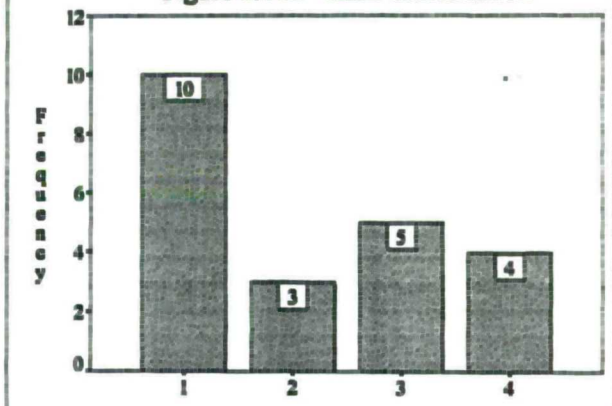


Figure 8.069 - R&D in Future

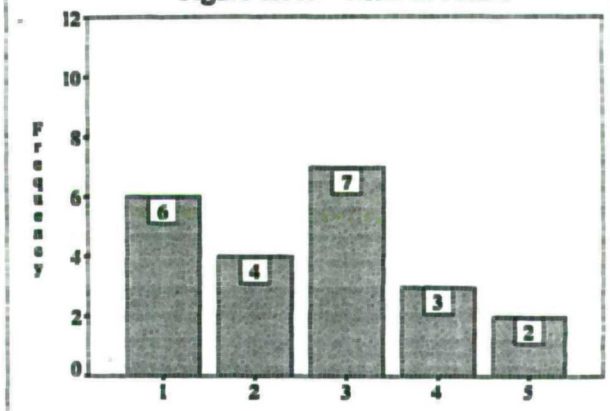


Figure 8.070 - Marketing in Boom

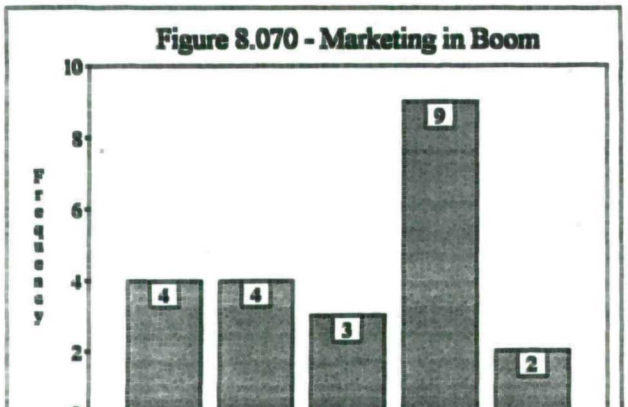


Figure 8.071 - Marketing in Recession

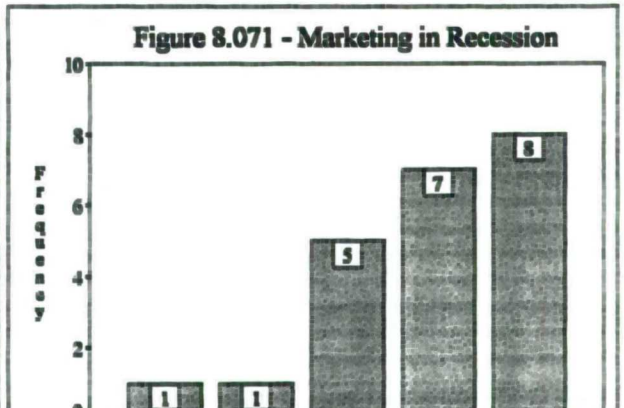
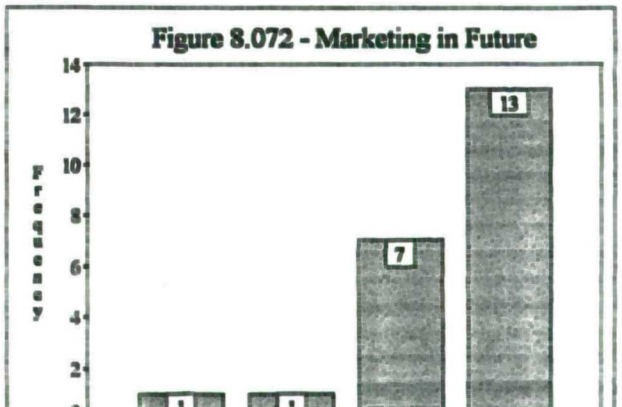


Figure 8.072 - Marketing in Future



8.3.07.1 Management

During the boom period, management was considered as quite important by the respondents as displayed in figure 8.073. In this period, the respondents were equally distributed in their ranking with twelve of them at the middle. However, management became more important in the recession when four firms regarded that it was extremely important as shown in figure 8.074. Six firms believed that it was very important and the other seven stated that it was quite important. Figure 8.075 shows that for the future three firms considered that it was extremely important and nine firms perceived that it was very important. Relatively the respondents considered that management would become even more important for the future than before.

8.3.07.2 Skilled Workers

Figure 8.076 shows that nine firms stated that skilled workers were very important while ten firms stated that they were quite important. During the recession eight firms regarded that they were very important and seven firms regarded that they were quite important as displayed in figure 8.077. This means that skilled workers becomes less important during the recession. However, the respondents perceived that this trend would change for the future as depicted in figure 8.078. Five firms perceived that they were extremely important and nine firms perceived that they were very important.

8.3.07.3 Cash from borrowing

The importance of cash from borrowing in the boom period is clearly shown by figure 8.079. Five firms regarded that it was extremely important and nine firms stated that it was very important. However, the frequency distribution had changed during the recession which reflected that the importance of borrowing had decreased (refer figure 8.080). For the future, it was perceived to become more important but still less than what it was during the boom period.

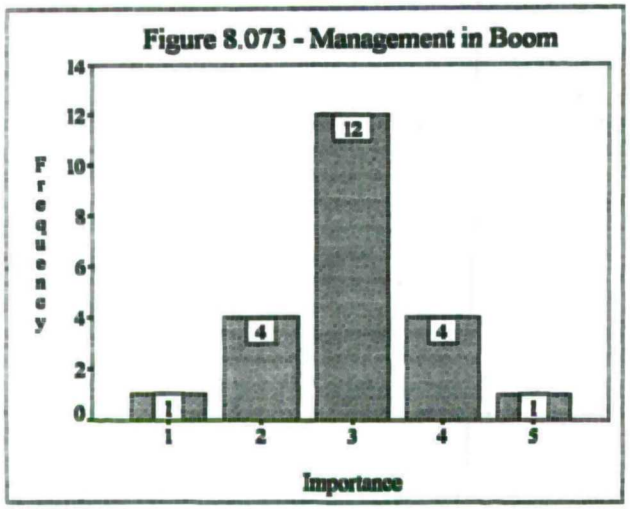


Figure 8.073 - Management in Boom
Frequency
Importance
1
4
12
4
1

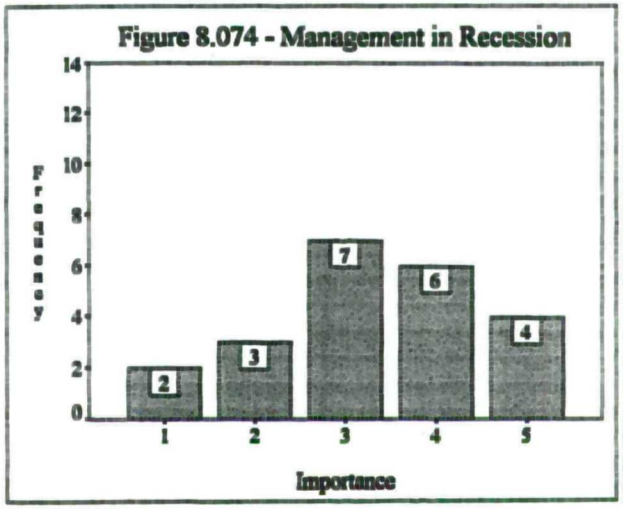


Figure 8.074 - Management in Recession
Frequency
Importance
2
3
7
6
4

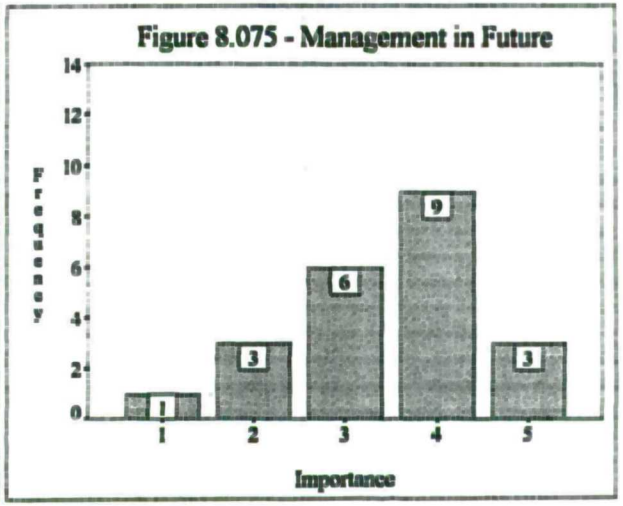


Figure 8.075 - Management in Future
Frequency
Importance
1
3
6
9
3

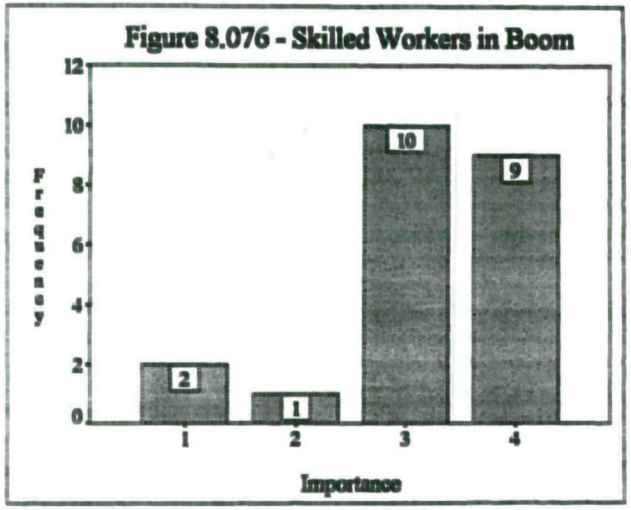


Figure 8.076 - Skilled Workers in Boom
Frequency
Importance
2
1
10
9

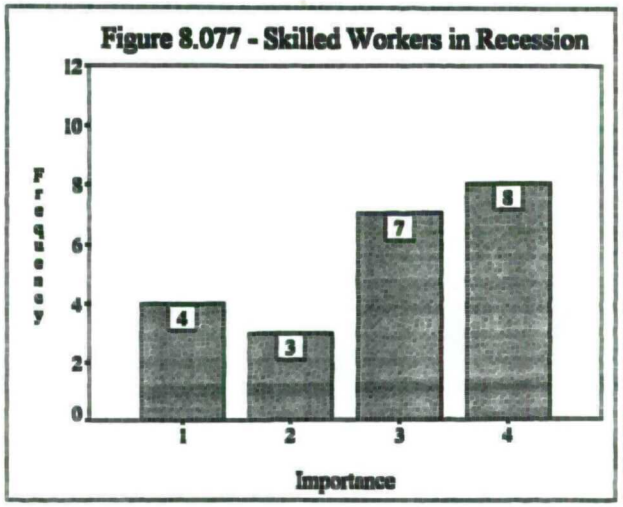


Figure 8.077 - Skilled Workers in Recession
Frequency
Importance
4
3
7
8

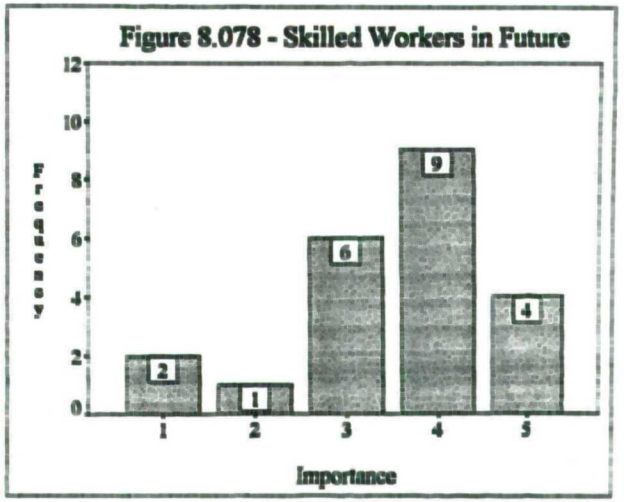


Figure 8.078 - Skilled Workers in Future
Frequency
Importance
2
1
6
9
4

8.3.07.4 Rights Issues

Figure 8.082, 8.083 and 8.084 are all skewed to the left which means that rights issues are considered as not important by the industry. It should be noted that rights issues are important to the companies which had been listed at the stock exchange. During the boom period four firms considered that rights issues were extremely important and three firms regarded that they were very important as displayed by figure 8.082. In the period of recession, only one firm stated that they were extremely important while eight firms believed that they were very important (see figure 8.083). For the future, two firms perceived that rights issues were extremely important and four firms perceived that they were very important.

8.3.07.5 Own Plant

Own plant is also considered as not important by the industry as displayed by figure 8.085, 8.086 and 8.087. All figures show frequency distributions which are skewed to the left which means that there are more firms which consider that this strategy is not important. The trends are quite consistent throughout the three periods.

8.3.07.6 Land bank

Land bank was considered as extremely important by five firms and considered as very important by ten firms in the boom economic period (see figure 8.088). However, the frequency distribution was skewed to the left during the recession as displayed by figure 8.089 which means that it became less important. For the future it was perceived to become more important than it was during the recession as shown in figure 8.090. The trends indicate that land banks are needed during the strong economic period by the housing developer.

Figure 8.079 - Borrowing in Boom

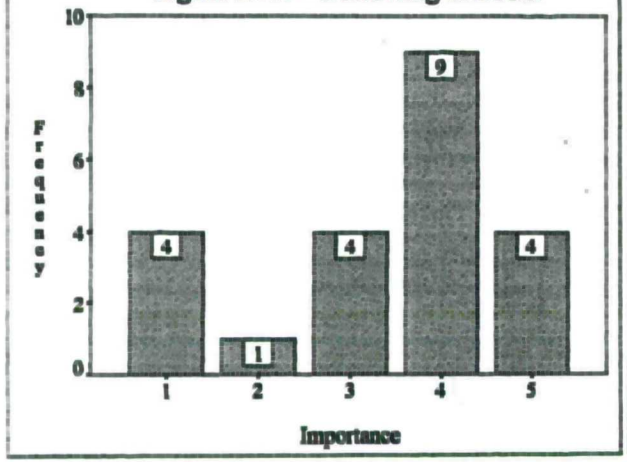


Figure 8.080 - Borrowing in Recession

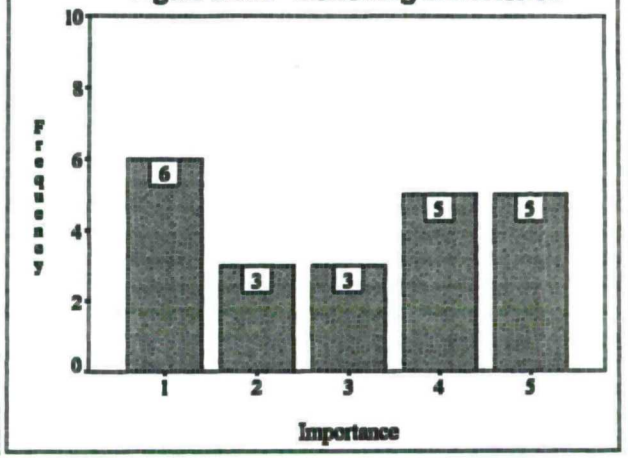


Figure 8.081 - Borrowing in Future

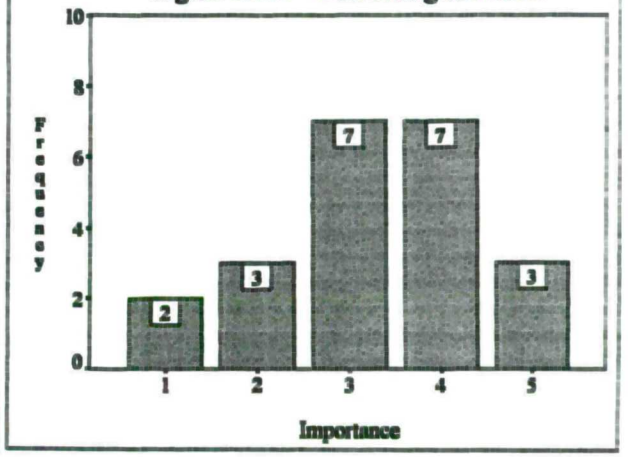


Figure 8.082 - Rights Issues in Boom

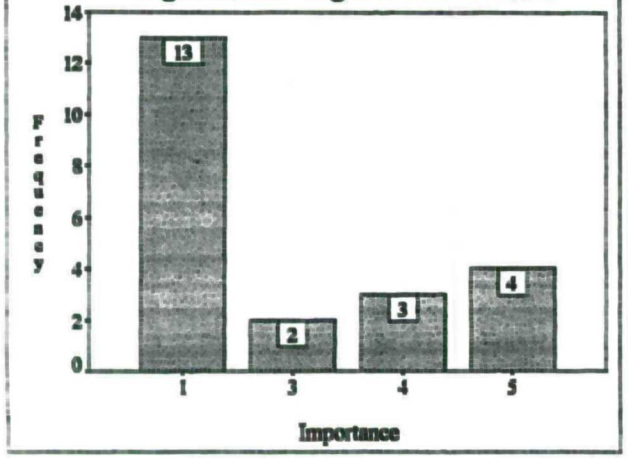


Figure 8.083 - Rights Issues in Recession

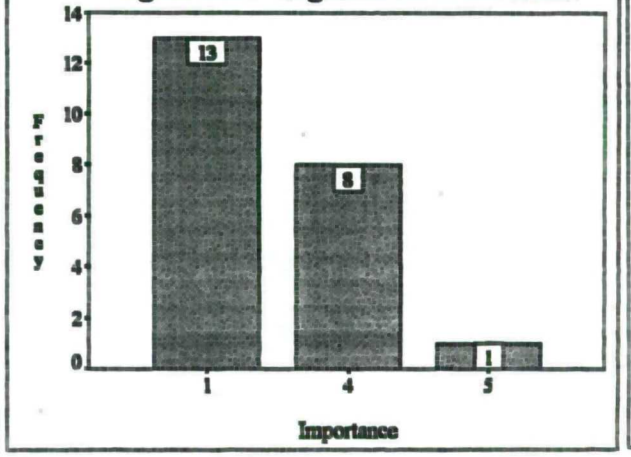
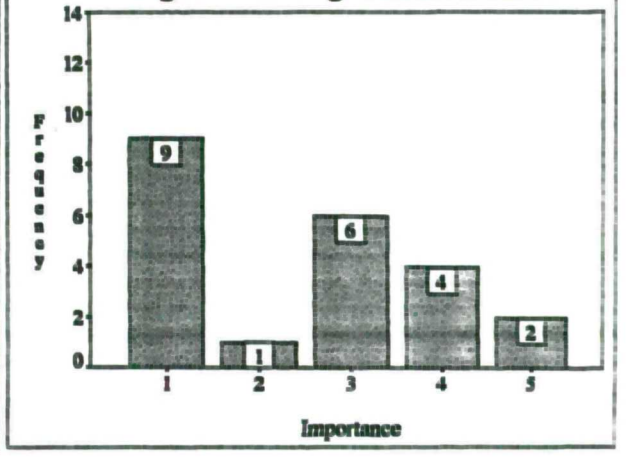


Figure 8.084 - Rights Issues in Future



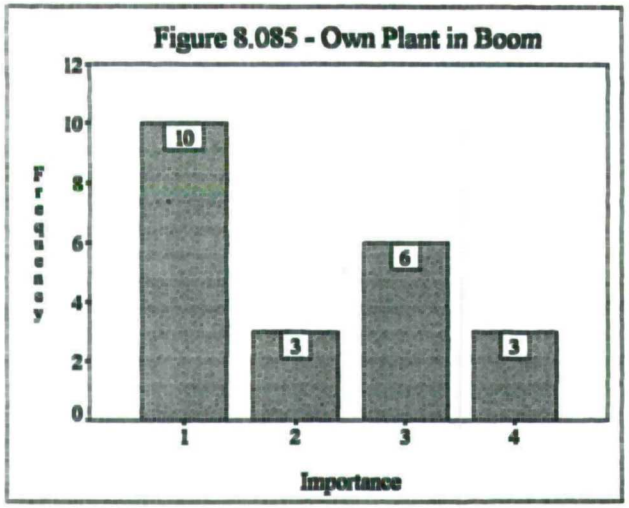


Figure 8.085 - Own Plant in Boom
Frequency
Importance
10
3
6
3

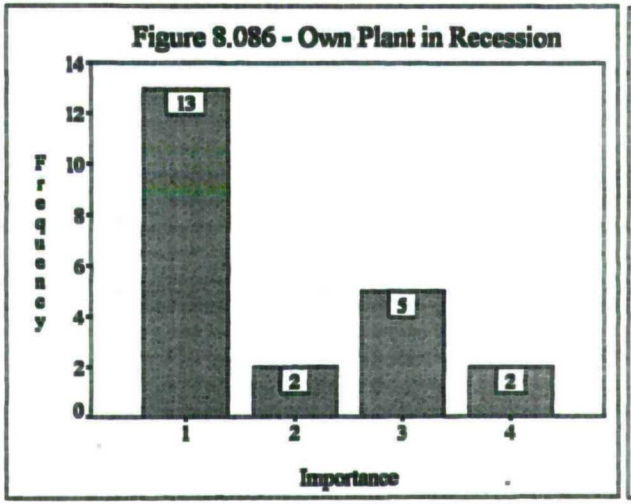


Figure 8.086 - Own Plant in Recession
Frequency
Importance
13
2
5
2

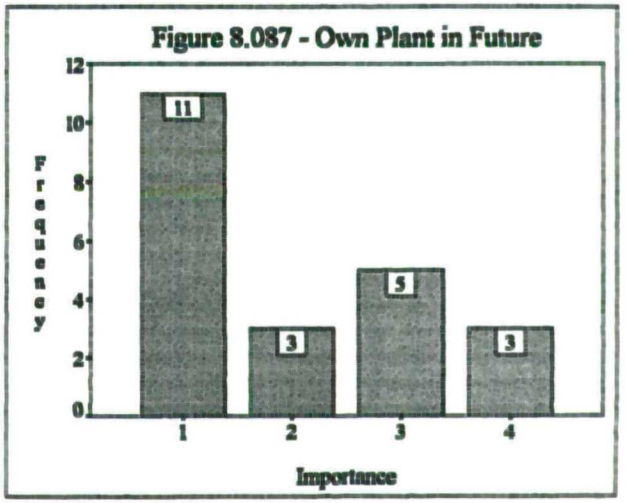


Figure 8.087 - Own Plant in Future
Frequency
Importance
11
3
5
3

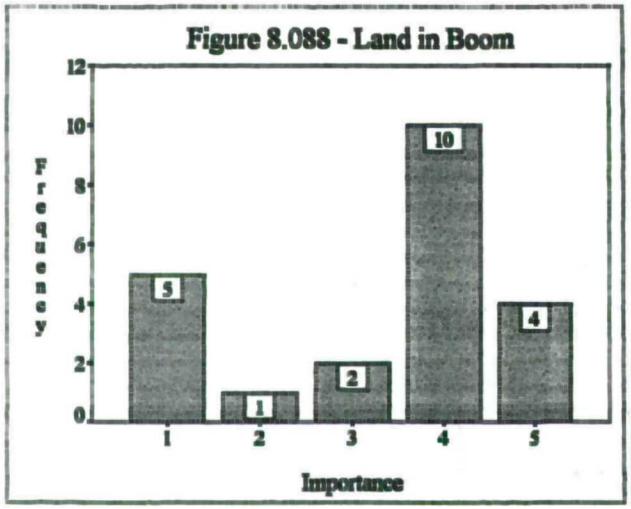


Figure 8.088 - Land in Boom
Frequency
Importance
5
1
2
10
4

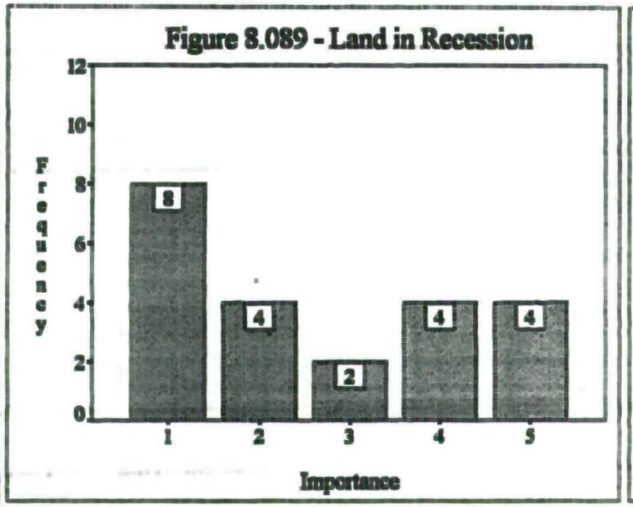


Figure 8.089 - Land in Recession
Frequency
Importance
8
4
2
4
4

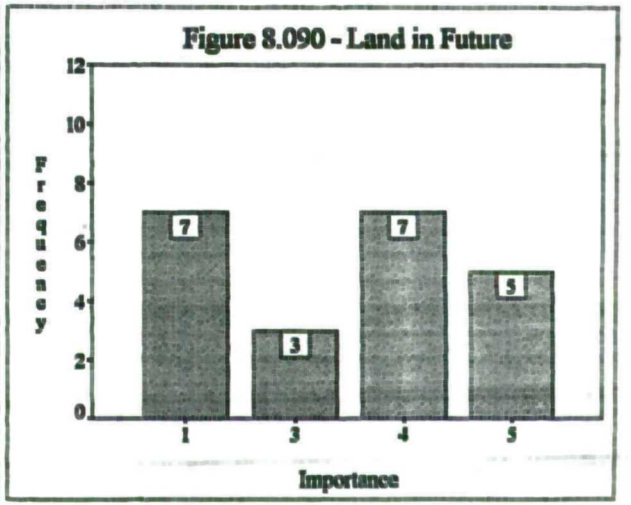


Figure 8.090 - Land in Future
Frequency
Importance
7
3
7
5

8.3.08 Financial Performance Measurements

Financial performance measurements consisted of: pre-tax profit, ROCE, ROSF, cash flow, liquidity ratio and gearing.

8.3.08.1 Pre-tax Profit

Figures 8.091, 8.092 and 8.093 are all skewed to the rights which indicate that pre-tax profit is considered as extremely important by the respondents. During the boom economic period and the recession, eleven firms regarded pre-tax profit as extremely important (see figure 8.091 and 8.092). For the future, this number would increase to thirteen as displayed by figure 8.093.

8.3.08.2 ROCE

ROCE is a measure of profit. Throughout the three periods, it has quite a consistent pattern in that it is considered as very important as shown by figure 8.094, 8.095 and 8.096. Figure 8.094 shows that five firms regarded that it was extremely important and six firms stated that it was very important. During the recession, these numbers of firms reduced to four and five respectively as depicted by figure 8.095. However, these numbers of firms increased again to six and seven for the future as shown by figure 8.096.

8.3.08.3 ROSF

ROSF is another measure of profit. During the boom period and for the future, the frequency distribution are skewed to the rights which indicate that ROSF is extremely important as displayed by figure 8.097 and 8.099. However, the frequency distribution is slightly skewed to the left during the recession as depicted by figure 8.098.

Figure 8.091 - Pre-tax Profit in Boom

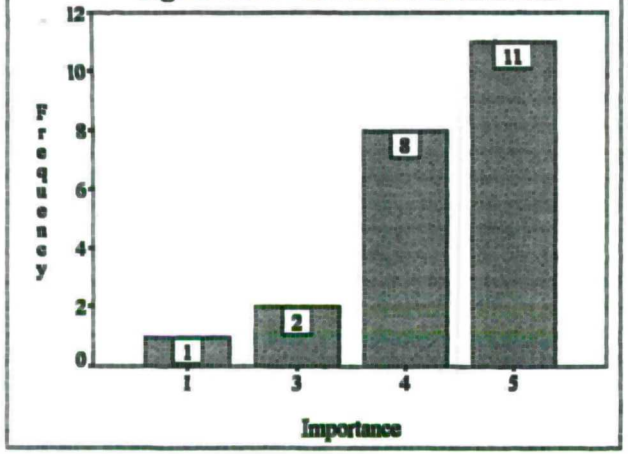


Figure 8.092 - Pre-tax Profit in Recession

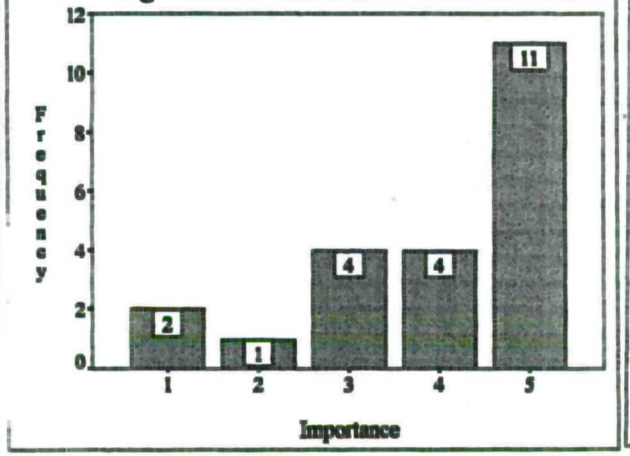


Figure 8.093 - Pre-tax Profit in Future

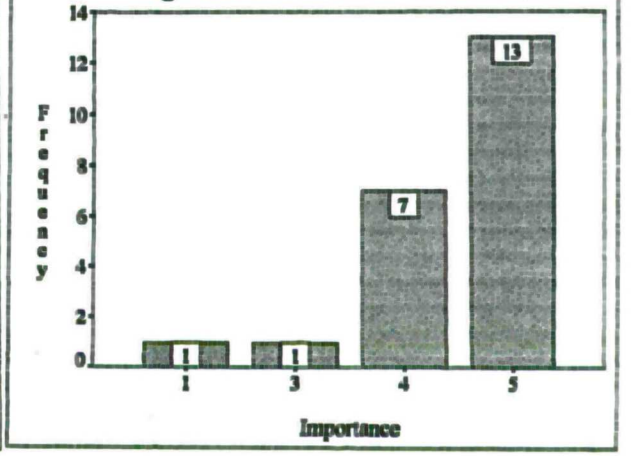


Figure 8.094 - ROCE in Boom

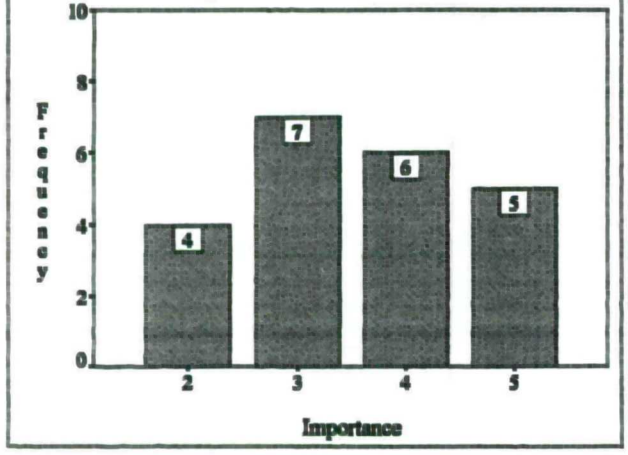


Figure 8.095 - ROCE in Recession

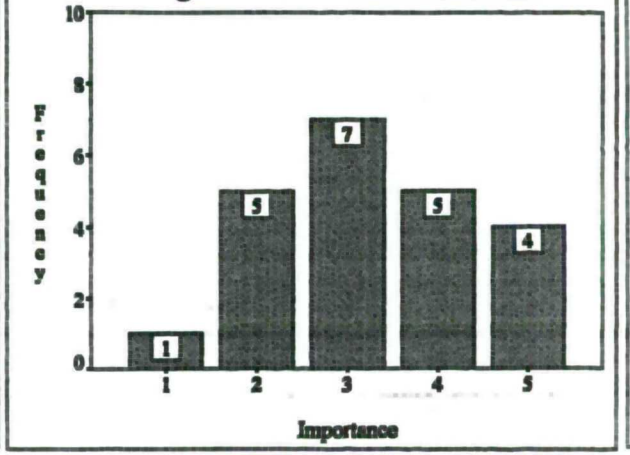
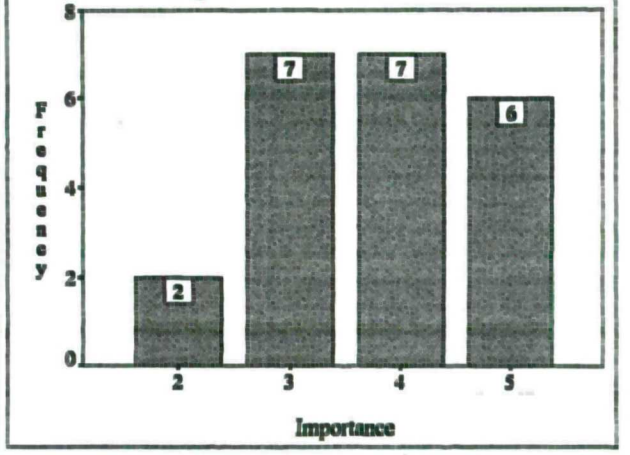


Figure 8.096 - ROCE in Future



8.3.08.4 Cash Flow

Cash flow has a very spectacular trend as shown by figures 8.100, 8.101 and 8.102. The frequency distribution is skewed to the rights in figure 8.100 which indicates that it was important. During the recession, seventeen firms considered that it was extremely important and five firms regarded that it was very important as shown by figure 8.101. The similar trend was perceived by the respondents for the future (see figure 8.102). For the future, fifteen firms perceived that it was extremely important while seven firms believed that it was very important.

8.3.08.5 Liquidity Ratio

Liquidity ratio includes current ratio and quick ratio. Unlike cash flow, the frequency distribution of liquidity ratio is more similarly distributed throughout the periods of study (refer figures 8.103, 8.104 and 8.105). In the boom period, only two firms regarded that it was extremely important, five firms regarded that it was very important and six firms stated that it was quite important. These numbers increased during the recession and for the future.

8.3.08.6 Gearing

Figure 8.106 shows that gearing is considered as quite important by the firms during the boom. This trend changed dramatically during the recession when eleven firms regarded that it was extremely important as displayed by figure 8.107. For the future, gearing was perceived as extremely important by nine firms and as very important by five firms as depicted by figure 8.108. It means that the degree of importance for the future is relatively less than it was during the recession.

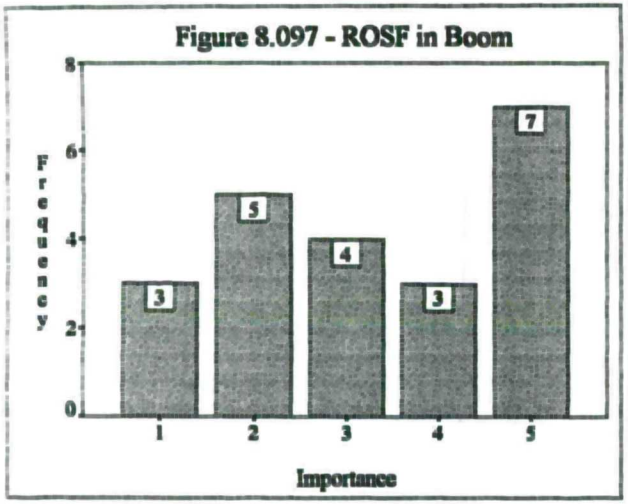


Figure 8.097 - ROSF in Boom
Frequency
0
2
4
6
8
3
5
4
3
7
1
2
3
4
5
Importance

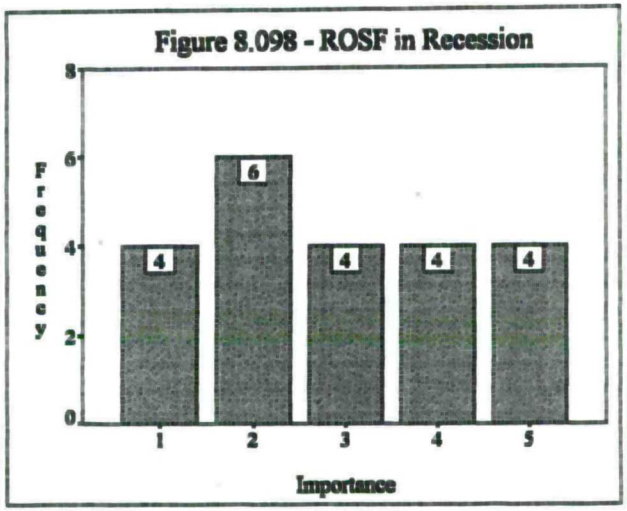


Figure 8.098 - ROSF in Recession
Frequency
0
2
4
6
8
4
6
4
4
4
1
2
3
4
5
Importance

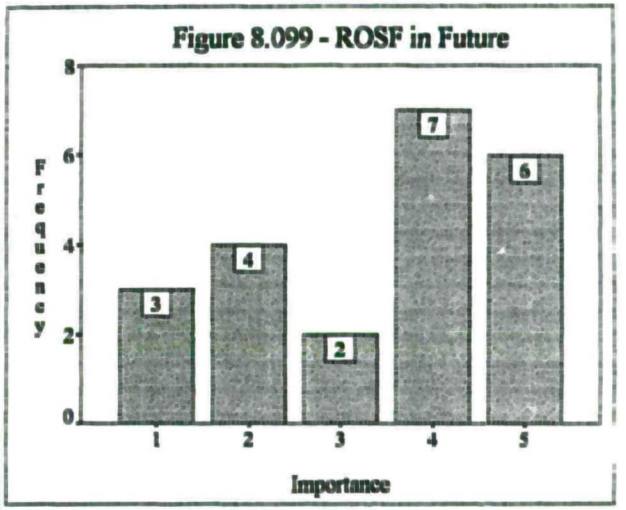


Figure 8.099 - ROSF in Future
Frequency
0
2
4
6
8
3
4
2
7
6
1
2
3
4
5
Importance

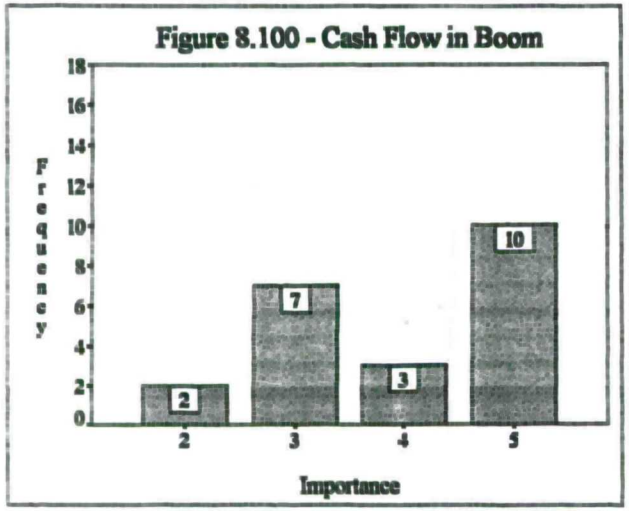


Figure 8.100 - Cash Flow in Boom
Frequency
0
2
4
6
8
10
12
14
16
18
2
7
3
10
2
3
4
5
Importance

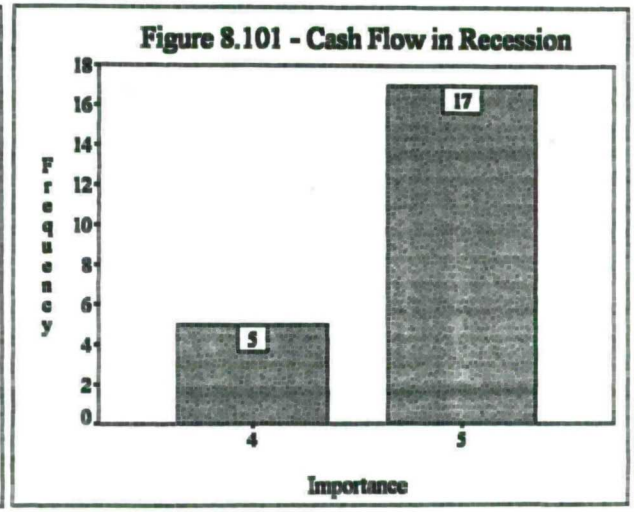


Figure 8.101 - Cash Flow in Recession
Frequency
0
2
4
6
8
10
12
14
16
18
5
17
4
5
Importance

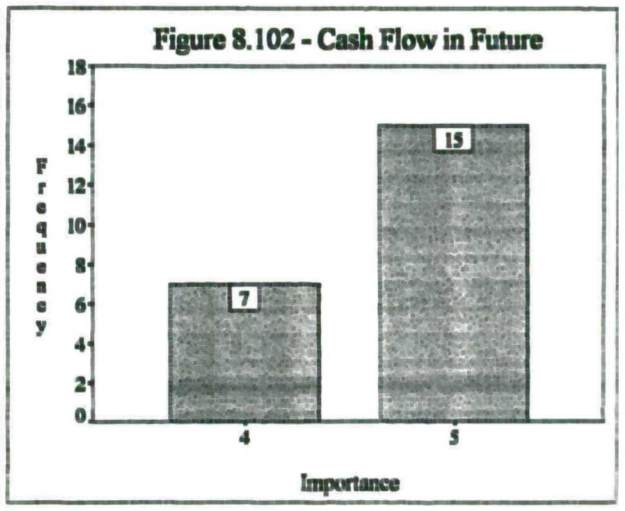


Figure 8.102 - Cash Flow in Future
Frequency
0
2
4
6
8
10
12
14
16
18
7
15
4
5
Importance

Figure 8.103 - Liquidity Ratio in Boom

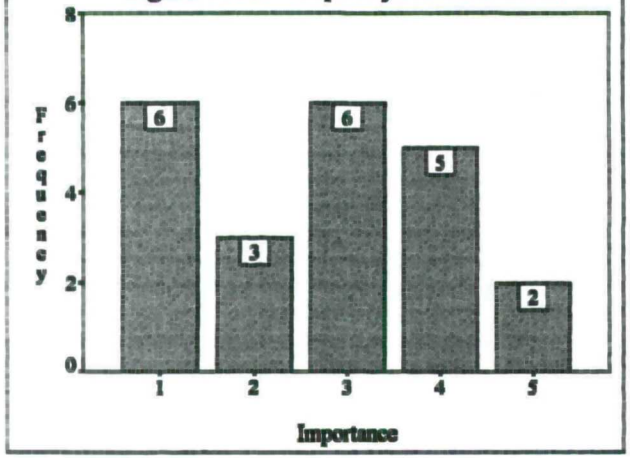


Figure 8.104 - Liquidity Ratio in Recession

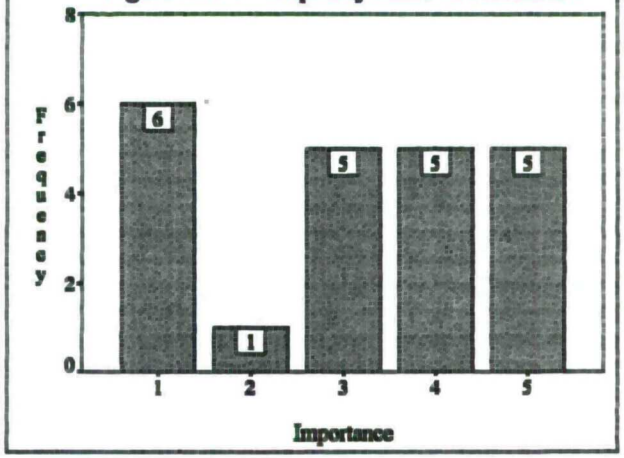


Figure 8.105 - Liquidity Ratio in Future

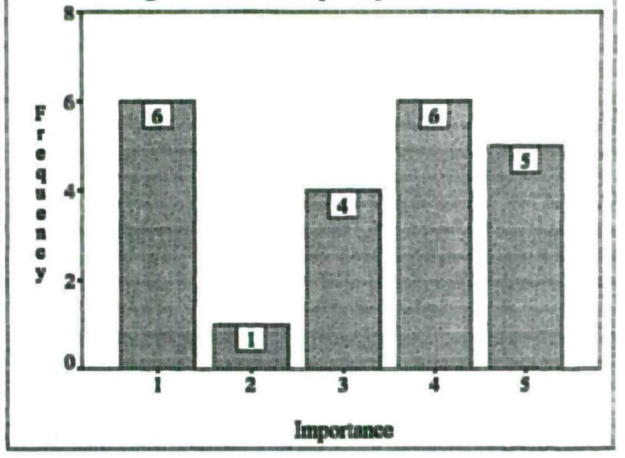


Figure 8.106 - Gearing in Boom

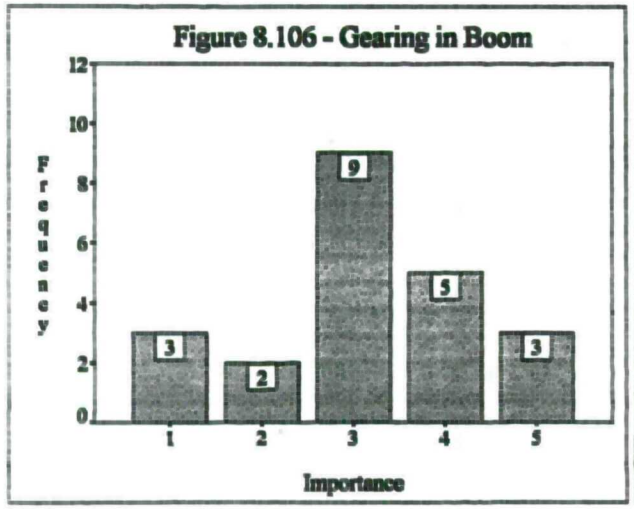


Figure 8.107 - Gearing in Recession

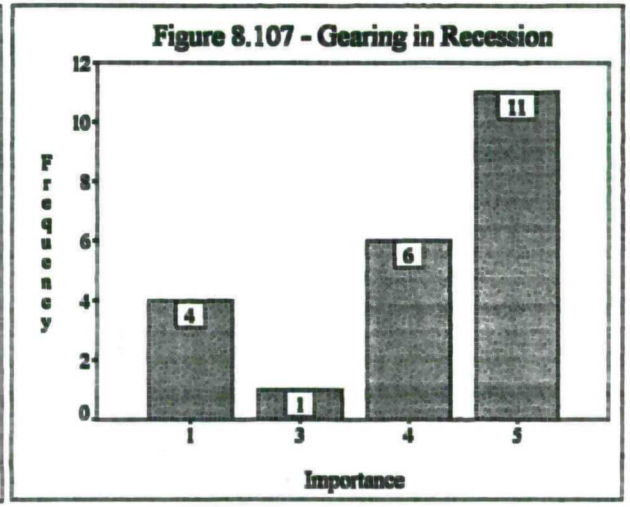
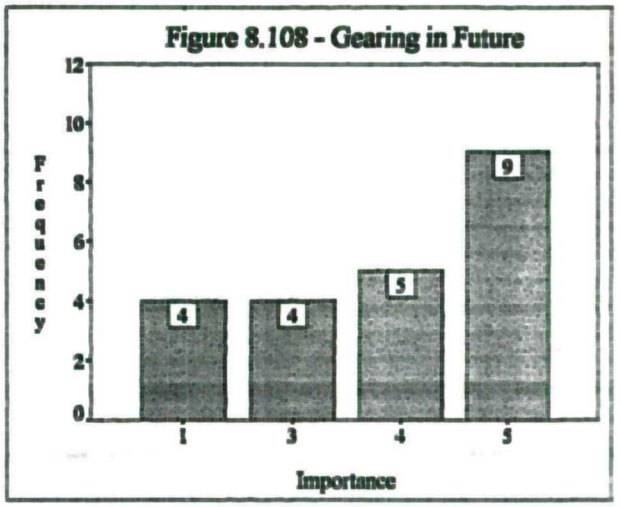


Figure 8.108 - Gearing in Future



8.3.09 Profit Determinants

Profit determinants include type of activity, geographical spread, market condition, competition, site productivity and cost control.

8.3.09.1 Type of Activity

The frequency distributions of type of activity within the three periods are skewed to the right as displayed by figures 8.109, 8.110 and 8.111. Five firms stated that type of activity was extremely important and nine firms regarded that it was very important in the boom economic period (see figure 8.109). In the next period, six firms believed that it was extremely important and twelve firms considered that it was very important (refer figure 8.110). For the future, eight firms perceived that it was extremely important and eleven firms thought that it was very important.

8.3.09.2 Geographical Spread

The perception of the respondents about geographical spread is irregular within the three periods as displayed in figures 8.112, 8.113 and 8.114. Figure 8.112 shows that three firms stated that it was extremely important while six firms regarded that it was very important. Figure 8.113 displays that five firms considered that it was extremely important and the other five firms believed that it was very important. For the future, it was perceived as extremely important by six firms and as very important by eight firms as illustrated by figure 8.114.

8.3.09.3 Market Condition

During the boom period, market condition was already considered as extremely important by eight firms as displayed by figure 8.115. However, one firm stated that it was not important. In the recession period, fifteen firms regarded that it

Figure 8.109 - Type of Activity in Boom

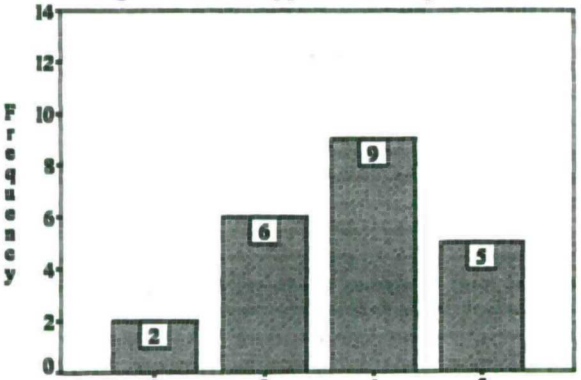


Figure 8.110 - Type of Activity in Recession

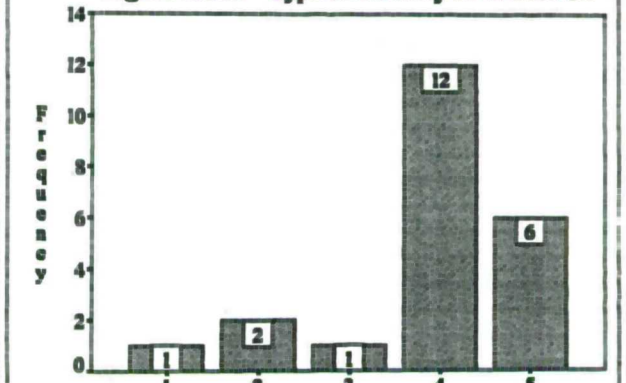


Figure 8.111 - Type of Activity in Future

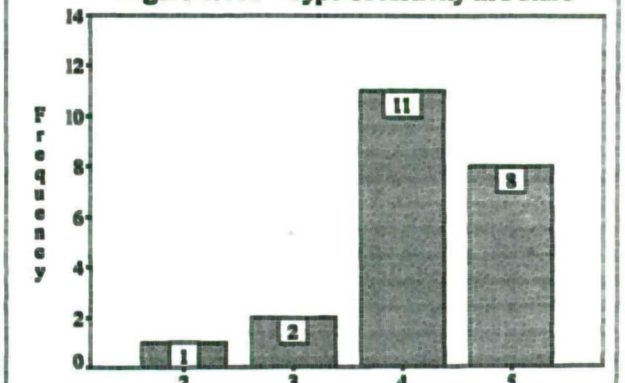


Figure 8.112 - Geographical Spread in Boom

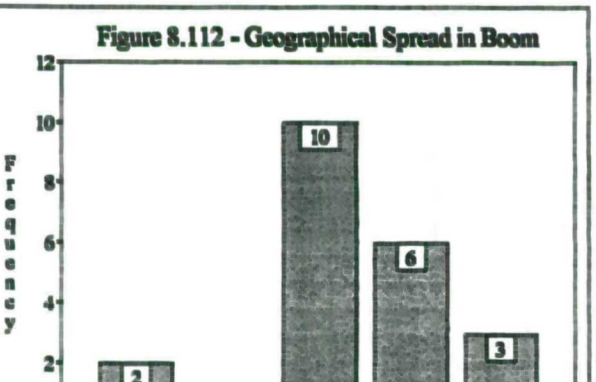


Figure 8.113 - Geographical Spread in Recession

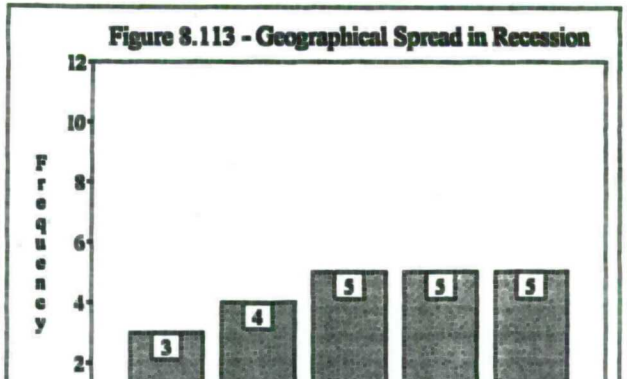
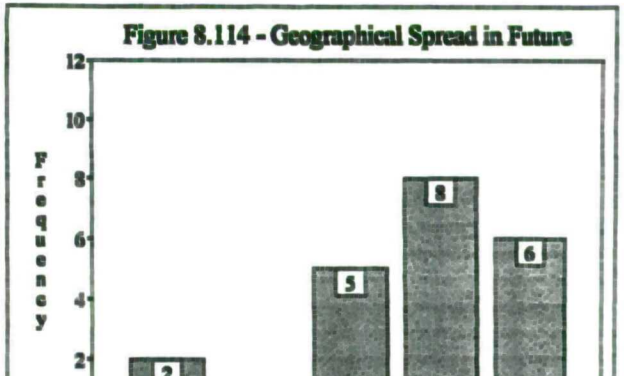


Figure 8.114 - Geographical Spread in Future



was extremely important while seven firms stated that it was very important as depicted by figure 8.116. For the future, fourteen firms perceived that it was extremely important and eight firms thought that it was very important (see figure 8.117). This indicates that the industry's market awareness was tremendously increased during and after the recession.

8.3.09.4 Competition

Figure 8.118 displays that competition is not really an important profit determinant during the boom period. However, figure 8.119 and 8.120 are clearly skewed to the right which indicates that it was perceived as an important profit determinant during the recession and for the future.

8.3.09.5 Site Productivity

Figure 8.121 exhibits that two firms regarded site productivity as extremely important during the boom period. Six firms stated that it was very important and ten firms considered that it was quite important profit determinant in the same period. In the next period, the frequency distribution of quite importance, very important and extremely important become equal with six firms for each rank (see figure 8.122). For the future, the frequency distribution is clearly skewed to the right which indicates that it can be an important profit determinant as displayed by figure 8.123.

8.3.09.6 Cost Control

During the boom period, cost control was not considered as a very important profit determinant by the respondents as shown by figure 8.124. However, figures 8.125 and 8.126 clearly exhibit that it was extremely important during the recession and for the future. Figure 8.125 shows that twelve firms regarded that it was extremely important while figure 8.126 displays that eleven firms considered that it was extremely important.

Figure 8.115 - Market Condition in Boom

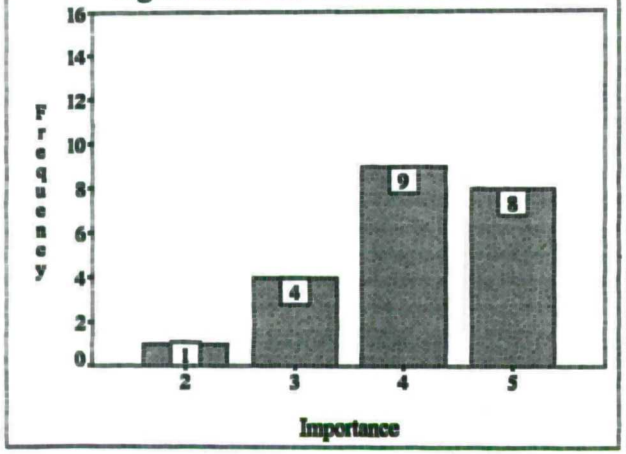


Figure 8.116 - Market Condition in Recession

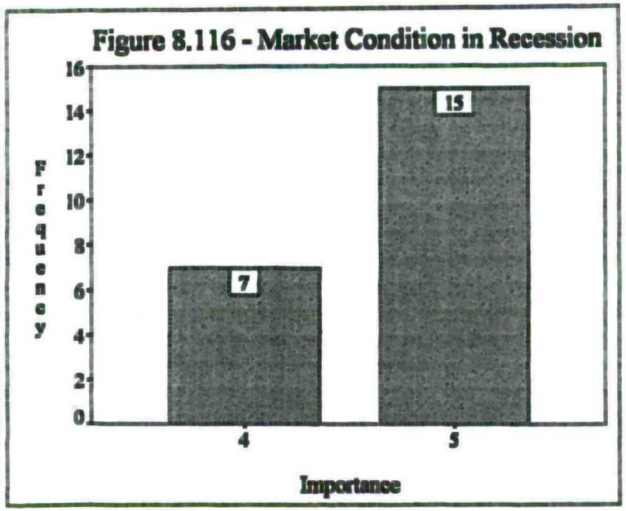


Figure 8.117 - Market Condition in Future

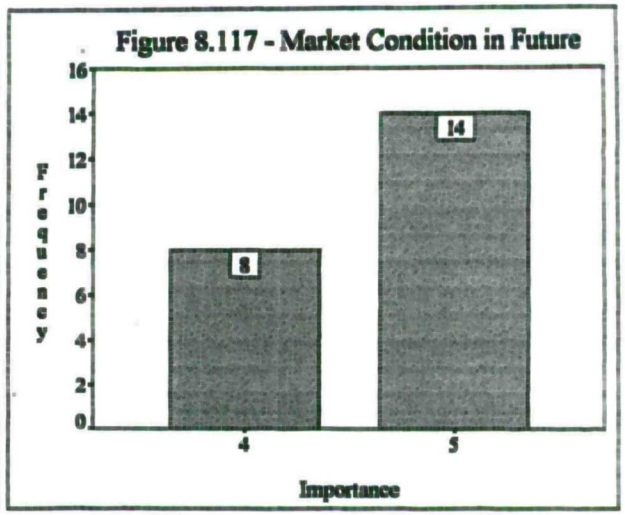


Figure 8.118 - Competition in Boom

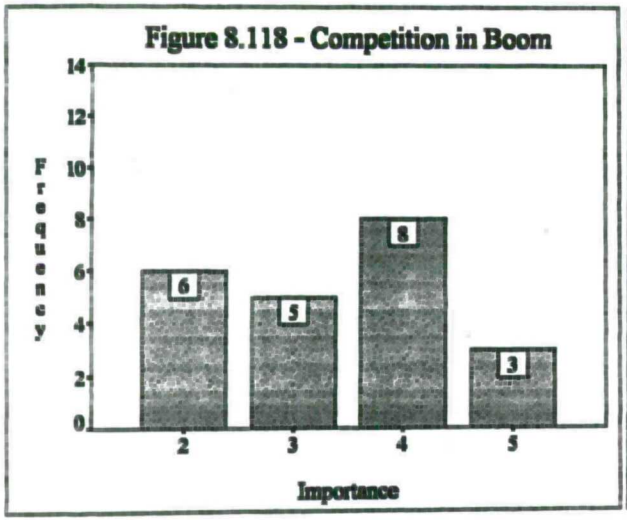


Figure 8.119 - Competition in Recession

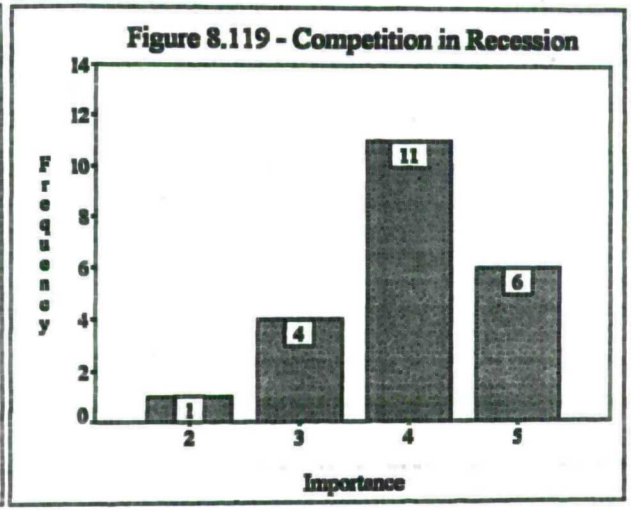


Figure 8.120 - Competition in Future

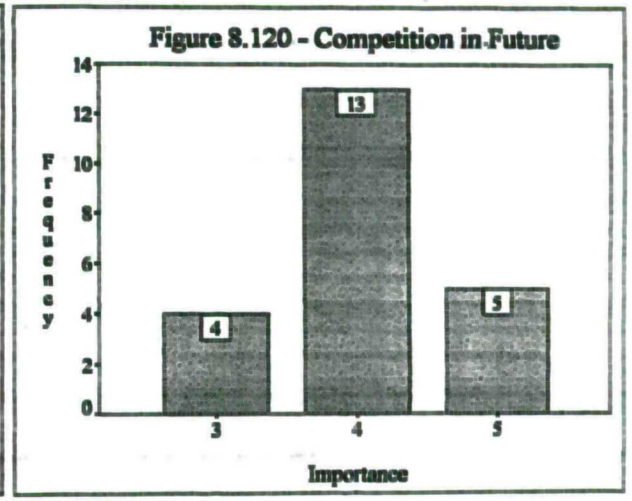


Figure 8.121 - Site Productivity in Boom

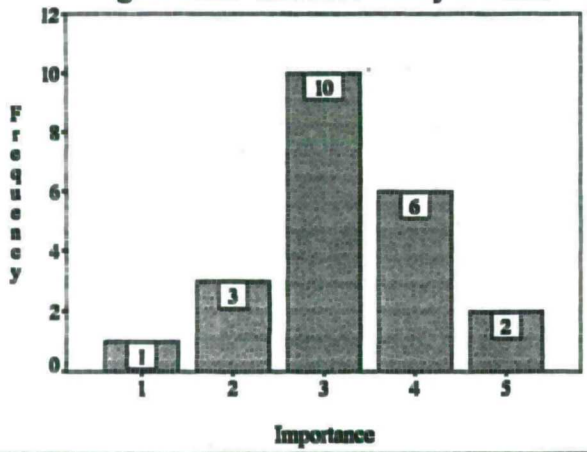


Figure 8.122 - Site Productivity in Recession

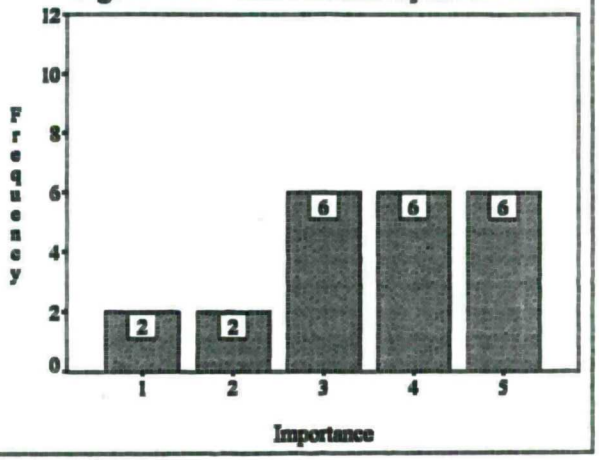


Figure 8.123 - Site Productivity in Future

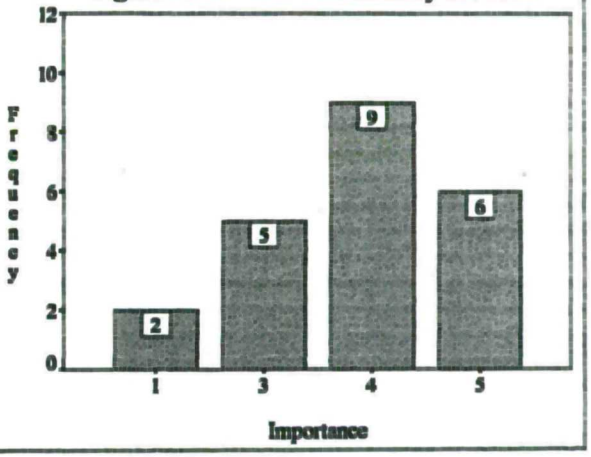


Figure 8.124 - Cost Control in Boom

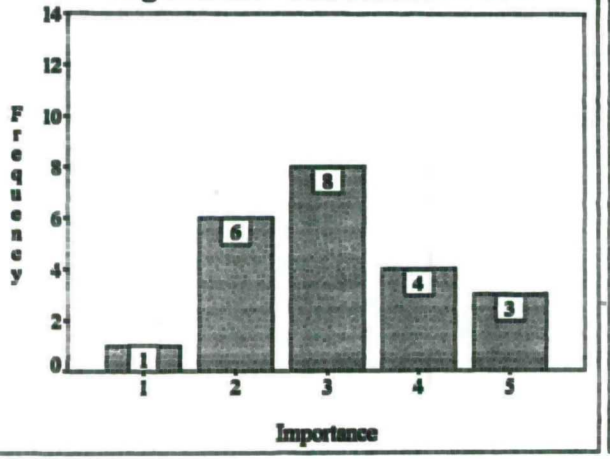


Figure 8.125 - Cost Control in Recession

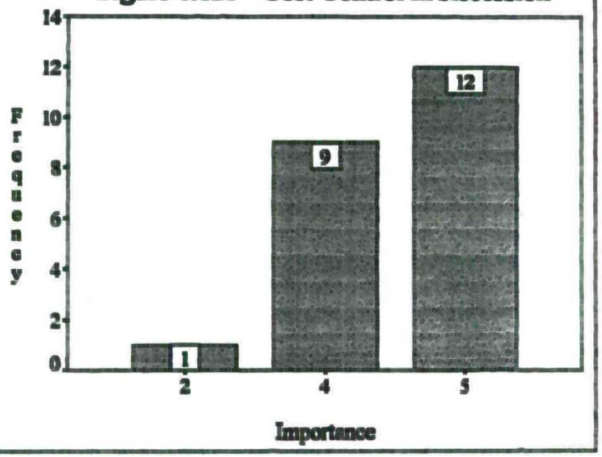
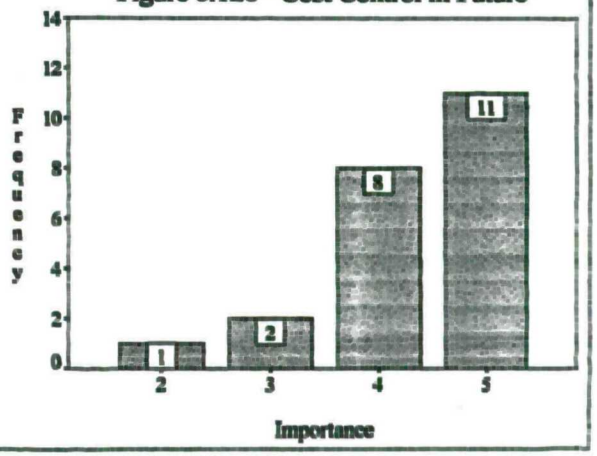


Figure 8.126 - Cost Control in Future



8.3.10 Loss Determinants

Loss determinants include type of activity, geographical spread, market condition, competition, poor site productivity and poor cost control which are quite similar to profit determinants. However, most of the respondents could not give appropriate ratings during the boom and for the future. They considered that most of the loss determinants were not at all important. This was because they did not incur any loss during the boom and similarly they did not perceive that they would incur any loss for the future. Therefore, loss determinants were not relevant in those two periods for them.

8.3.10.1 Type of Activity

Figures 8.127 and 8.129 display that the frequency distributions are skewed to the left which indicate that it was not an important loss determinant. This was because most of the respondents were profitable during the boom period and they were also expecting profitable results for the future. However, during the period of recession eight firms regarded that it was an extremely important loss determinant (refer figure 8.128). On the other end, five firms (which might be profitable) stated that type of activity was not at all important as a loss determinant.

8.3.10.2 Geographical Spread

Unlike type of activity, geographical spread was not considered as an important loss determinant within the three periods. Figures 8.130, 8.131 and 8.132 are all skewed to the left which indicate that it was not at all important as a loss determinant.

Figure 8.127 - Type of Activity in Boom

(Loss determinant)

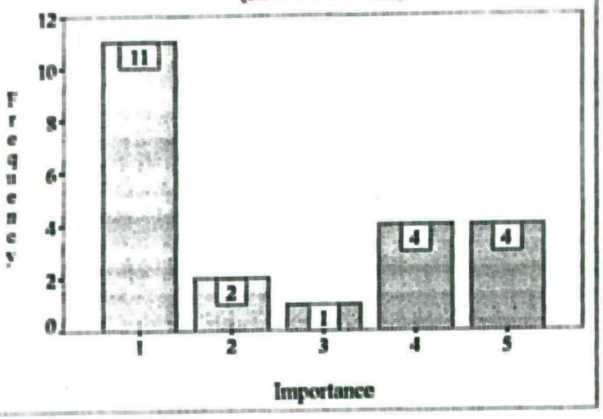


Figure 8.128 - Type of Activity in Recession

(Loss determinant)

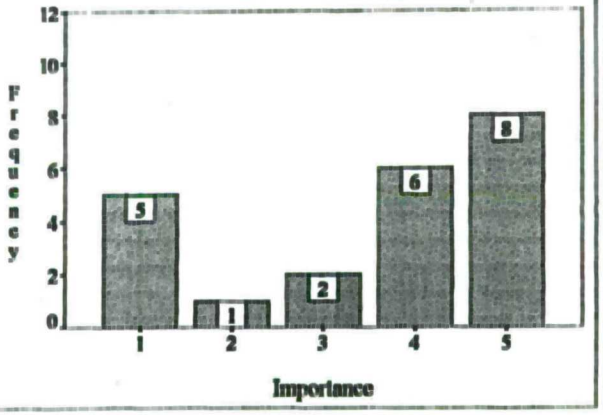


Figure 8.129 - Type of Activity in Future

(Loss determinant)

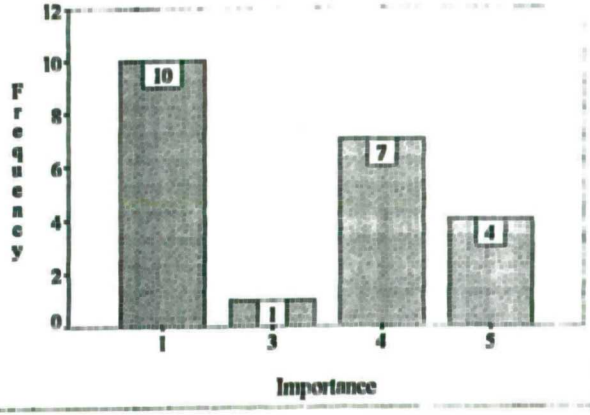


Figure 8.130 - Geographical Spread in Boom

(Loss determinant)

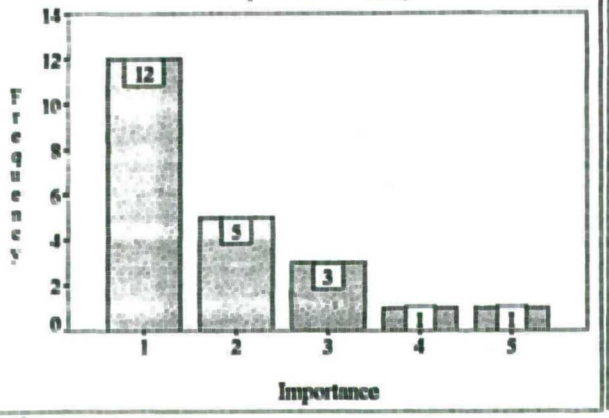


Figure 8.131 - Geographical Spread in Recessior

(Loss determinant)

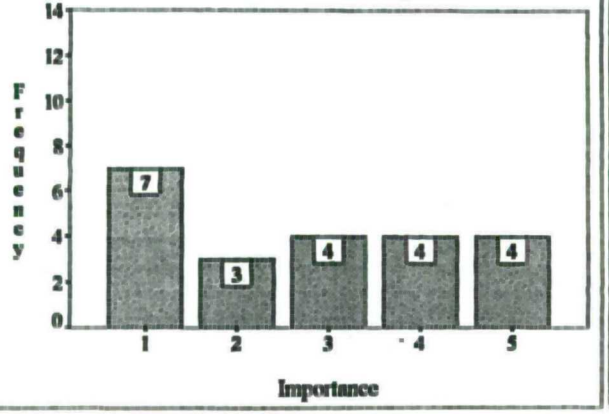
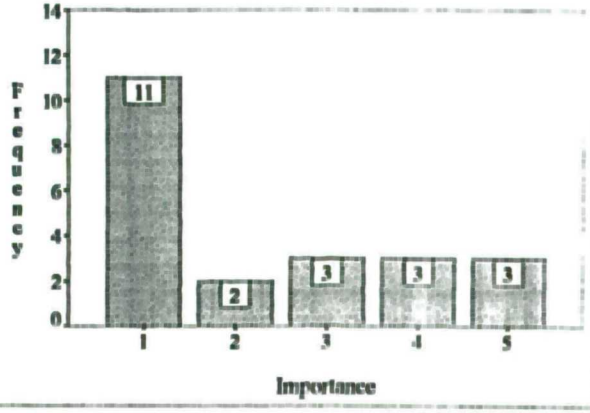


Figure 8.132 - Geographical Spread in Future

(Loss determinant)



5.3.10.03

Market Condition

Market condition was regarded as not at all important by twelve firms during the period of economic boom as displayed in figure 8.133. Since market condition was good during the boom, the industry considered that market condition had no relation with loss. However, this pattern had reversed during the period of recession when thirteen firms regarded that market condition was extremely important while five firms considered that it was not at all important as exhibited in figure 8.134. For the future, the frequency distribution was more balance with ten firms perceived as not at all important while seven firms perceived as extremely important (refer figure 8.135).

8.3.10.4 Competition

During the boom period, competition was not considered as an important loss determinant as exhibited by figure 8.136. In the next period, eight firms considered that it was extremely important while six firms regarded that it was not at all important (see figure 8.137). Figure 8.138 shows that ten firms perceived that it was not all important but ten five firms believed that it was an extremely important loss determinant for the future.

8.3.10.5 Poor Site Productivity

The frequency distribution of this determinant is very consistent throughout the three periods of the study as displayed by figures 8.139, 8.140 and 8.141. The distribution is skewed to the left which indicates that it is not at all important as a loss determinant. However, there was one respondent who consistently regarded that it was an extremely important loss determinant within the three periods of the study.

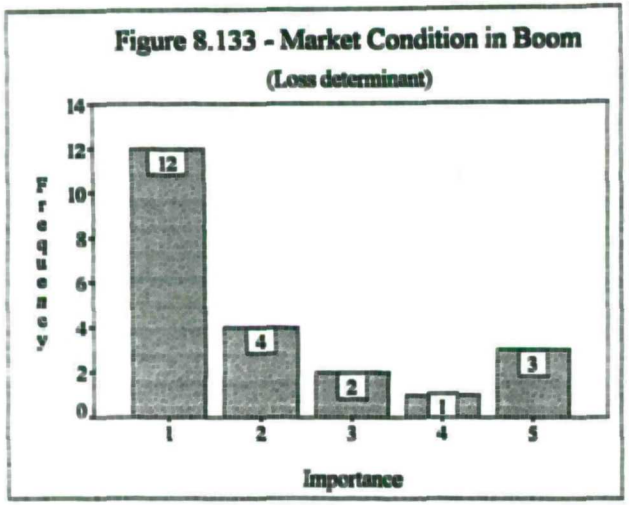


Figure 8.133 - Market Condition in Boom
(Loss determinant)
Frequency
Importance
12
4
2
1
3

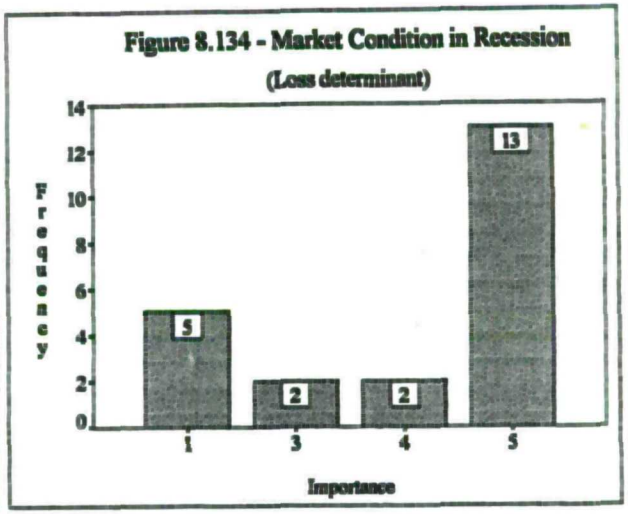


Figure 8.134 - Market Condition in Recession
(Loss determinant)
Frequency
Importance
5
2
2
13

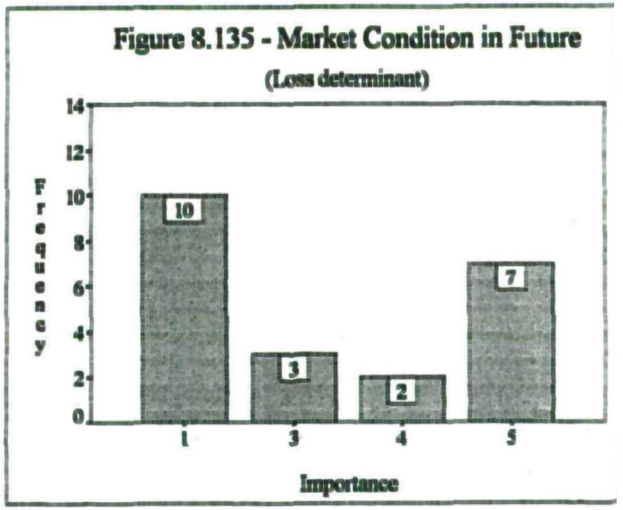


Figure 8.135 - Market Condition in Future
(Loss determinant)
Frequency
Importance
10
3
2
7

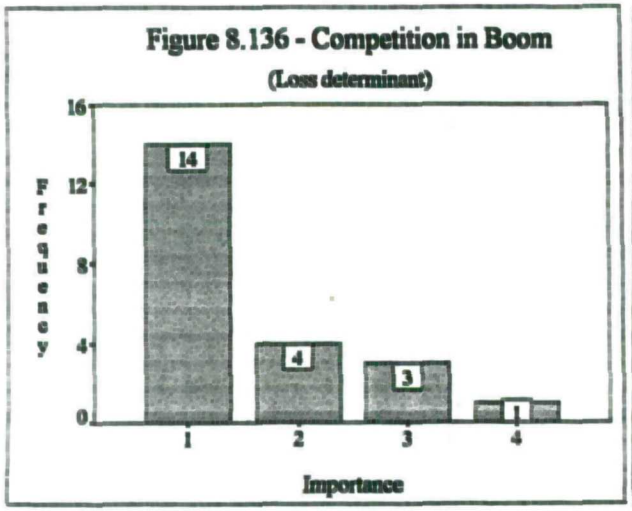


Figure 8.136 - Competition in Boom
(Loss determinant)
Frequency
Importance
14
4
3
1

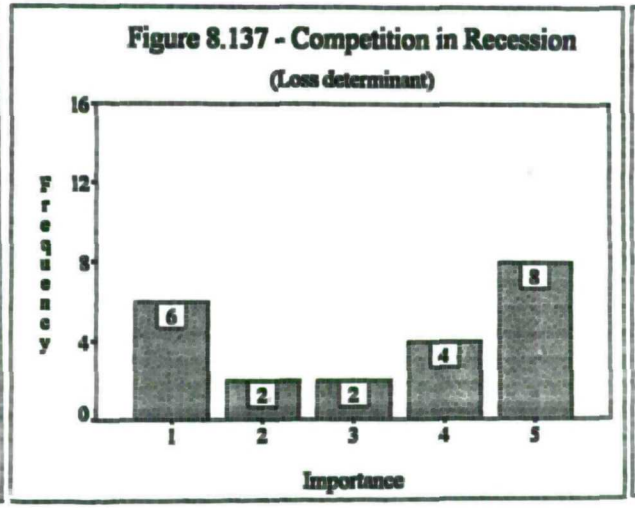


Figure 8.137 - Competition in Recession
(Loss determinant)
Frequency
Importance
6
2
2
4
8

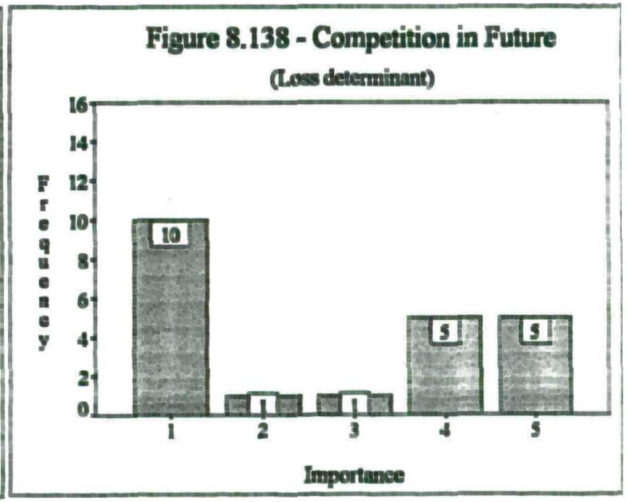


Figure 8.138 - Competition in Future
(Loss determinant)
Frequency
Importance
10
1
1
5
5

Figure 8.139 - Poor Site Productivity in Boom (Loss determinant)

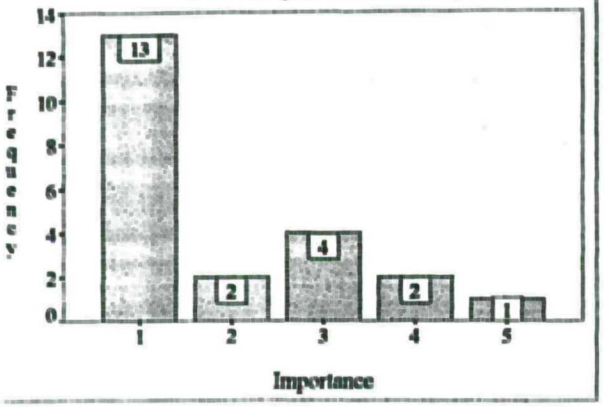


Figure 8.140 - Poor Site Productivity in Recession (Loss determinant)

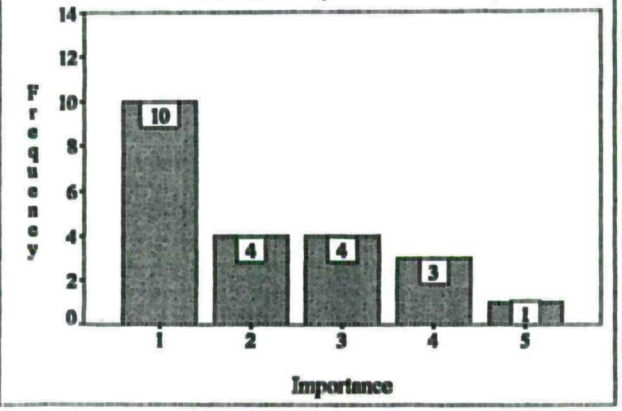


Figure 8.141 - Poor Site Productivity in Future (Loss determinant)

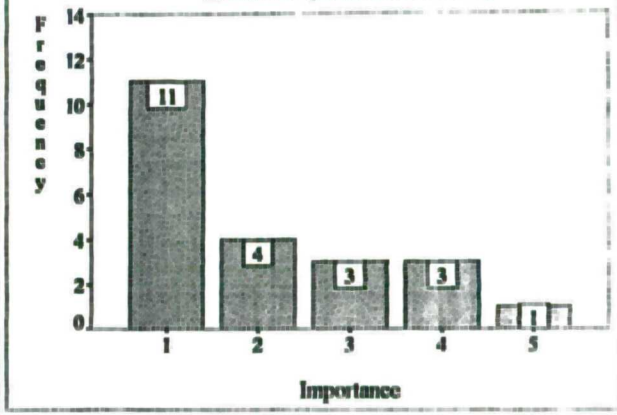


Figure 8.142 - Poor Cost Control in Boom (Loss determinant)

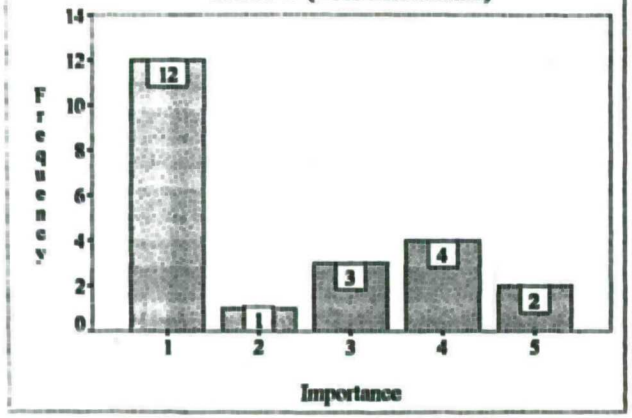


Figure 8.143 - Poor Cost Control in Recession (Loss determinant)

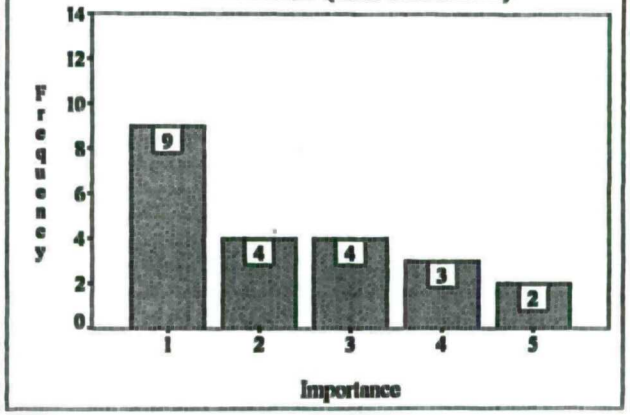
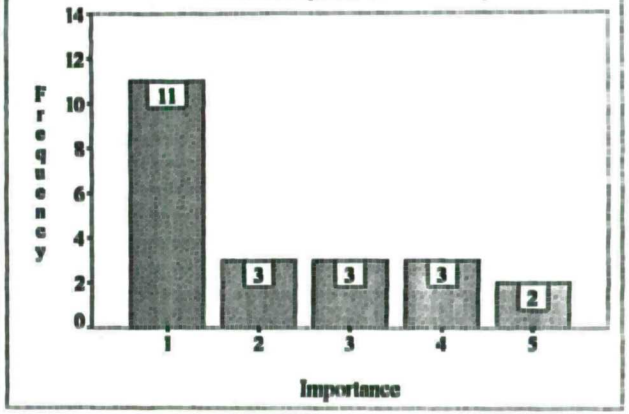


Figure 8.144 - Poor Cost Control in Future (Loss determinant)



8.3.10.6 Poor Cost Control

Figure 8.142 displays that the frequency distribution is skewed to the left which indicates that it was not considered as an important loss determinant during the boom period. However, two firms believed that it was an extremely important loss determinant in the same period. Figure 8.143 and 8.144 show the similar pattern as the previous period is which are skewed to the left. Therefore it was considered as not at all important within the three periods of study.

8.3.11 Strategic Management Practice

Some aspects of strategic management practice include: anticipating changes in the market conditions; analysing competition; measuring company's achievements; having corporate strategy; and employing external strategic management consultants.

8.3.11.1 Anticipating Changes In The Market Conditions

There is a clear pattern throughout the three economic periods that the firms' perceptions concerning the practice of anticipating changes in the market conditions is increasing as shown in figures 8.145, 8.146 and 8.147. During the boom period, there was one firm which considered that this practice was not at all important. On the other end, four firms stated that this practice was extremely important as shown by figure 8.145. Figure 8.146 exhibits that eight firms regarded that this practice as extremely important and ten firms believed that it was very important. For the future, nine firms perceived that it was extremely important and eleven firms thought that it was very important as depicted by figure 8.147.

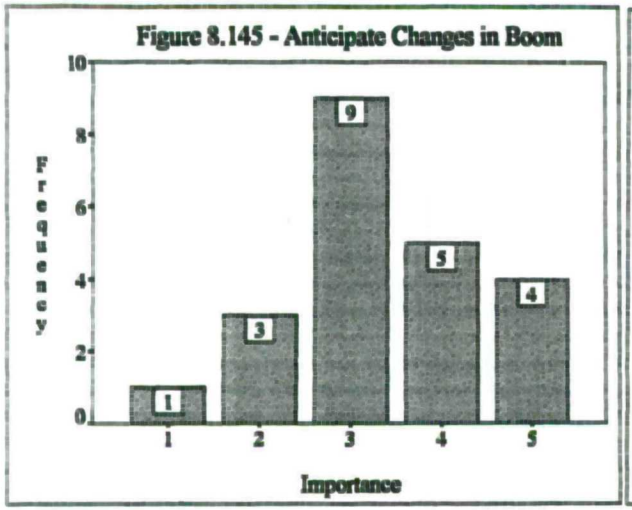


Figure 8.145 - Anticipate Changes in Boom
Frequency
Importance
1
3
9
5
4

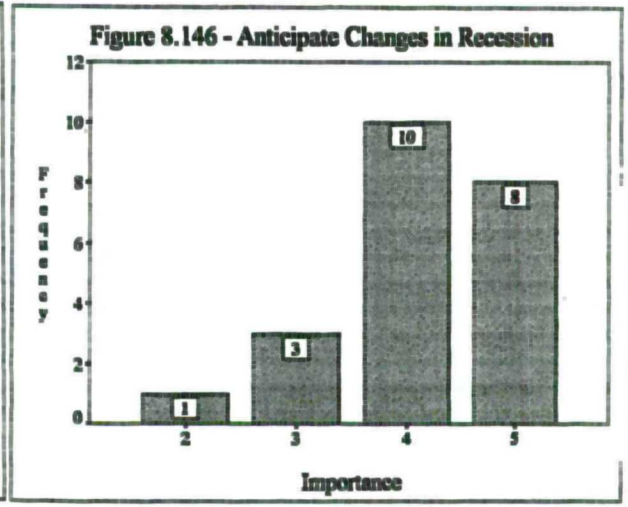


Figure 8.146 - Anticipate Changes in Recession
Frequency
Importance
1
3
10
8

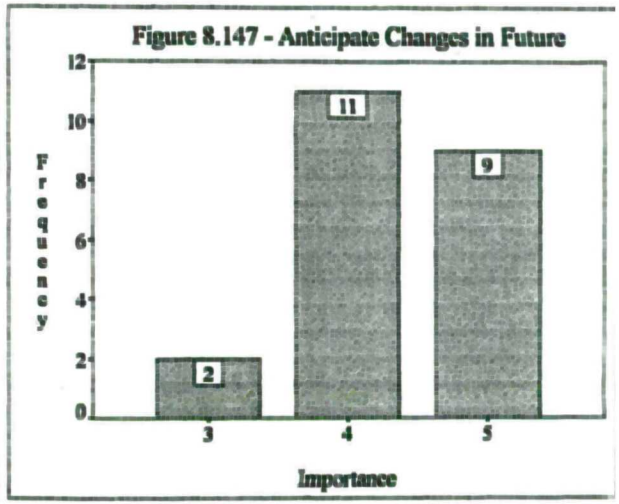


Figure 8.147 - Anticipate Changes in Future
Frequency
Importance
2
11
9

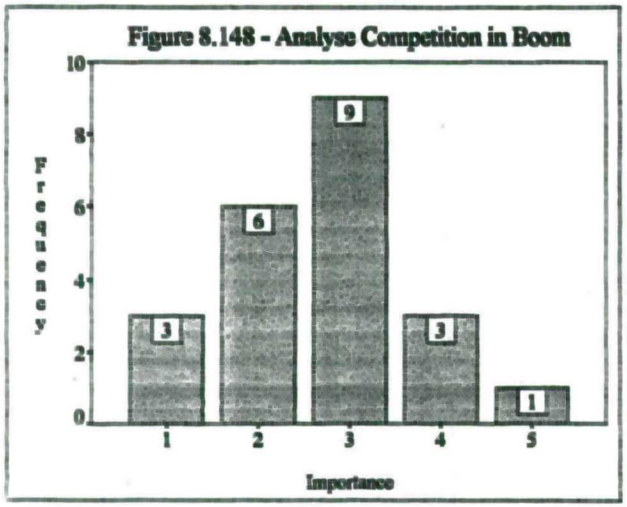


Figure 8.148 - Analyse Competition in Boom
Frequency
Importance
3
6
9
3
1

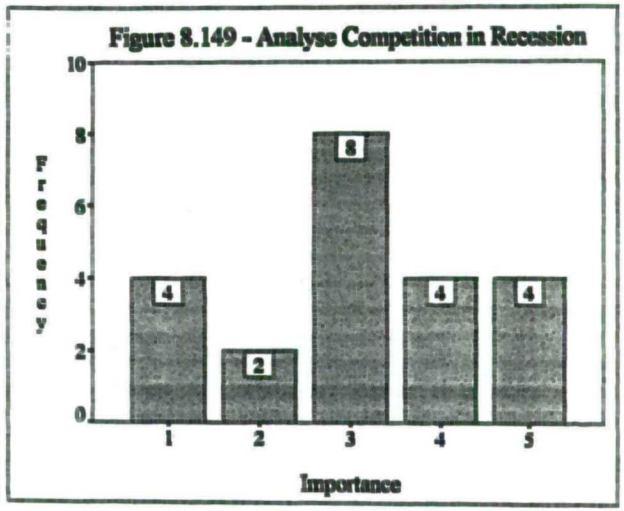


Figure 8.149 - Analyse Competition in Recession
Frequency
Importance
4
2
8
4
4

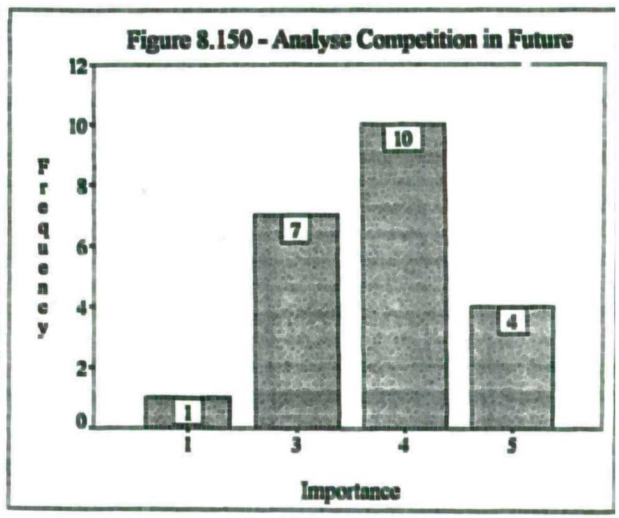


Figure 8.150 - Analyse Competition in Future
Frequency
Importance
1
7
10
4

8.3.11.2 Analysing Competition

In the boom period, there were more firms which considered that analysing competition was not important as displayed by figure 8.148. This trend was changing in the period of recession. In this period, the number of firms which considered that this strategy was important was increasing as depicted by figure 8.149. Figure 8.150 confirms that the industry as a whole perceived that analysing competition was either very important or extremely important for the future. This trend was another indication that the industry's market awareness had increased during and after the recession.

8.3.11.3 Measuring Achievements

Throughout the three periods the firms as a whole considered that measuring achievements in comparison with the targets was always important as displayed by figures 8.151, 8.152 and 8.153. During the economic boom, only three firms regarded that this strategy was either not important or not at all important as exhibited by figure 8.151. When the economy turned soft, only one firm believed that it was not important as depicted by figure 8.152. However, there was no one who perceived that this strategy was not important for the future as displayed in figure 8.153.

8.3.11.4 Having Strategic Planning

In the period of economic boom, the sample was almost equally divided in their consideration on the importance of having strategic planning as depicted by figure 8.154. Moving into the recession, most of the firms had placed higher importance on them having strategic planning as displayed by figure 8.155. For the future, this trend would become more dominant among the firms as displayed by figure 8.156.

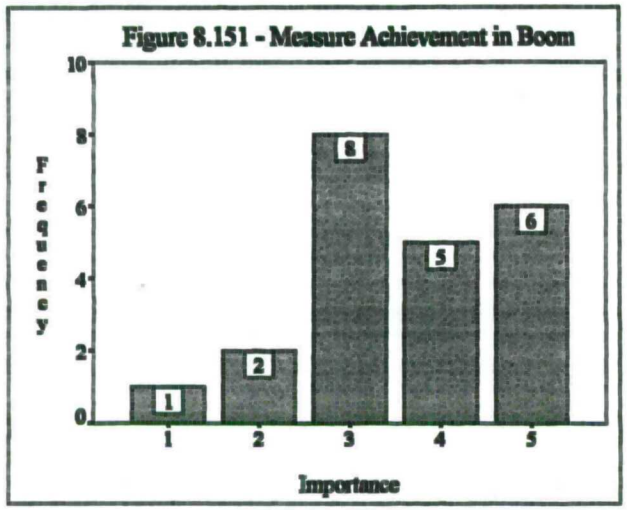


Figure 8.151 - Measure Achievement in Boom
Frequency
Importance
1
2
3
4
5
1
2
8
5
6

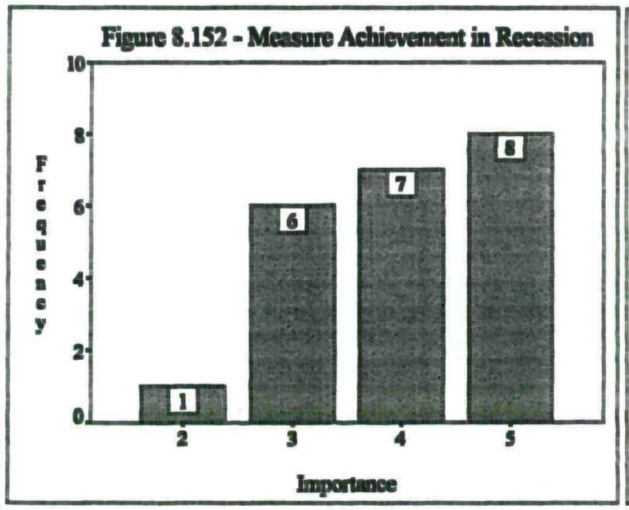


Figure 8.152 - Measure Achievement in Recession
Frequency
Importance
2
3
4
5
1
6
7
8

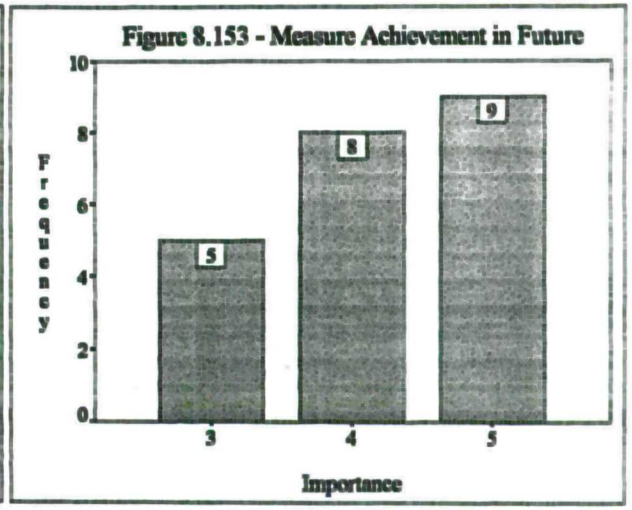


Figure 8.153 - Measure Achievement in Future
Frequency
Importance
3
4
5
5
8
9

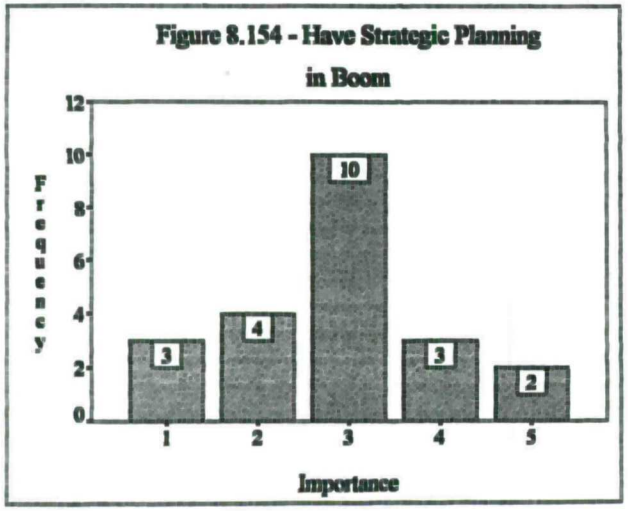


Figure 8.154 - Have Strategic Planning in Boom
Frequency
Importance
1
2
3
4
5
3
4
10
3
2

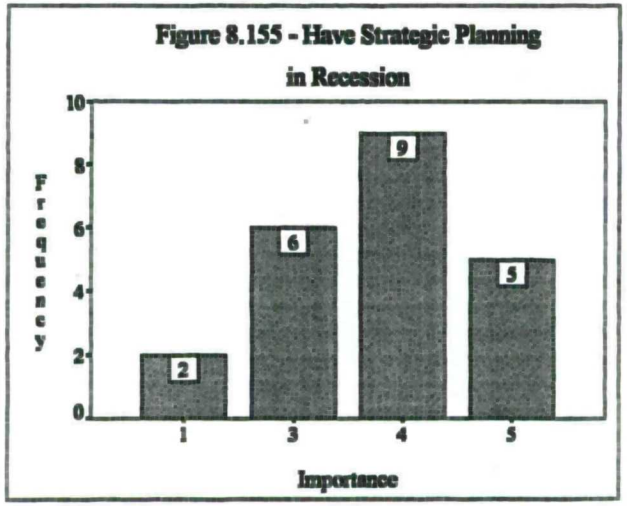


Figure 8.155 - Have Strategic Planning in Recession
Frequency
Importance
1
3
4
5
2
6
9
5

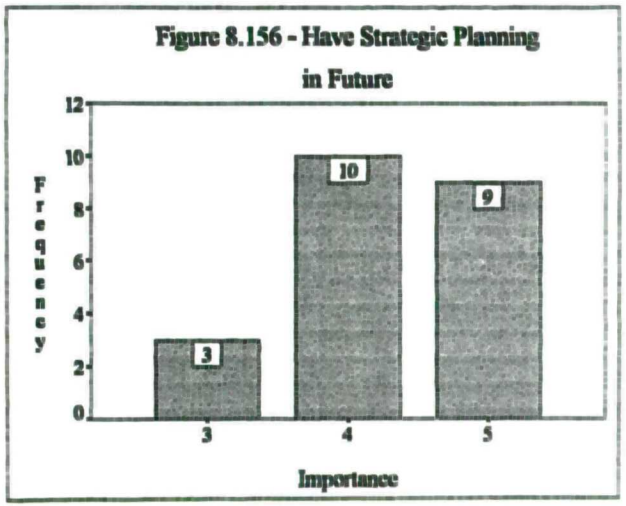


Figure 8.156 - Have Strategic Planning in Future
Frequency
Importance
3
4
5
3
10
9

8.3.7.5 Employing External Strategic Management Consultants

Except for a very few firms, most of the respondents considered that employing an external strategic management consultant was not at all important (refer figures 8.157, 8.158 and 8.159). During the recession, two firms regarded that this strategy was extremely important as shown by figure 8.158. For the future, two firms perceived that it was very important and one firm believed that it was extremely important (see figure 8.159). However, the majority of the firms considered that to employ an external consultant as not at all important.

8.4 Comparison of Means

In the previous section, frequency analysis was used to describe the respondents' perceptions on various strategic variables. The results of the frequency analysis are able to explain the overall trends of the respondents' perceptions in detail. However, it is quite difficult to make a comparison among the variables because each of them is analysed separately. Therefore, the comparison of means of the strategic variables is necessary in order to identify which one is more important in the three different economic periods.

The comparison of means will be carried out under the following headings:

1. Directional Strategies;
2. Method Strategies;
3. Generic Strategies;
4. Diversification Strategy;
5. Internationalisation Strategy;
6. Functional Strategies;
7. Resource Strategy;
8. Financial Performance Measurement;
9. Profit Determinants;

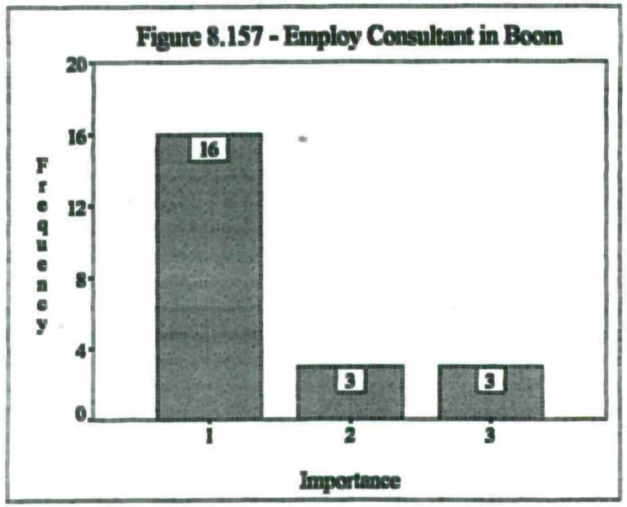


Figure 8.157 - Employ Consultant in Boom
Frequency
20
16
12
8
4
0
16
3
3
1
2
3
Importance

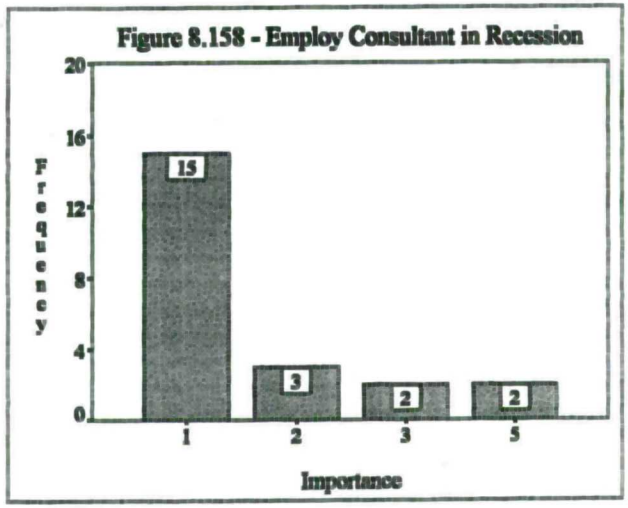


Figure 8.158 - Employ Consultant in Recession
Frequency
20
16
12
8
4
0
15
3
2
2
1
2
3
5
Importance

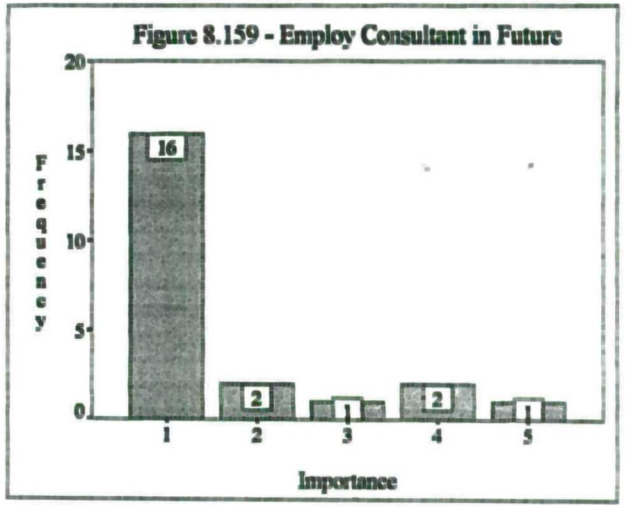


Figure 8.159 - Employ Consultant in Future
Frequency
20
15
10
5
0
16
2
1
2
1
1
2
3
4
5
Importance

10. Loss Determinants: and

11. Strategic Management Practice.

8.4.01 Directional Strategies

Figure 8.160 shows the comparison between three variables of directional strategies within the three different economic periods, i.e., boom, recession and future. During the boom period, expansion was the most important strategy followed by status-quo and retrenchment. Expansion was considered as very important whilst status-quo and retrenchment were regarded as not important and not at all important respectively. This pattern had reversed during the recession. Expansion was considered as not important whilst status-quo and retrenchment were regarded as quite important. Retrenchment was at the highest position during the period of recession. This trend had reversed again for the future and it was quite similar to the pattern of the boom economic period.

8.4.02 Method Strategies

There are consistent trends for method strategies throughout the three different economic periods as presented in figure 8.161. Throughout the periods of the study, internal expansion was the most important strategy followed by joint-venture, acquisition and merger. The only variation of the trend was that the degree of importance of internal expansion had decreased during the period of recession. However, it increased again for the future.

8.4.03 Generic Strategies

The trend of three generic strategies is shown in figure 8.162. During the boom period, focus on core business was considered as the most important and then followed by reduce fixed cost (and overhead) and offering financial packages. However, reduction of overhead became the most important strategy during the

Figure 8.160 - Direction Strategy

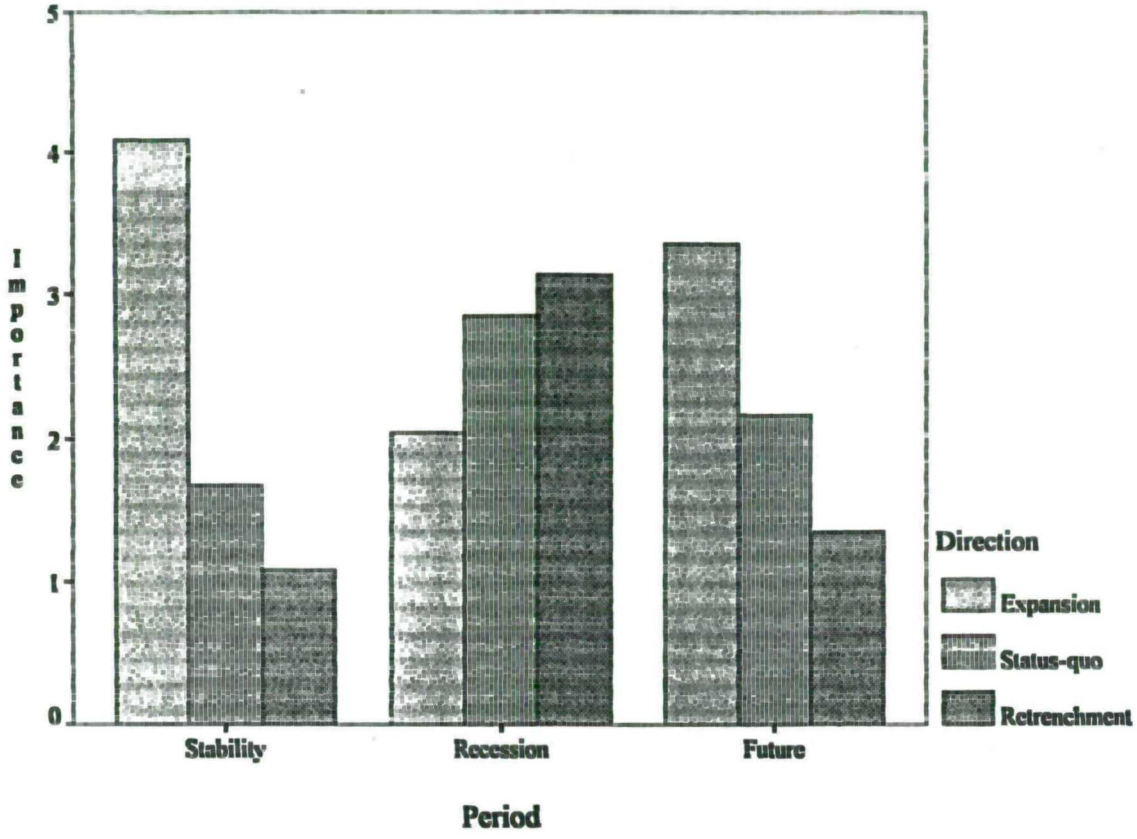
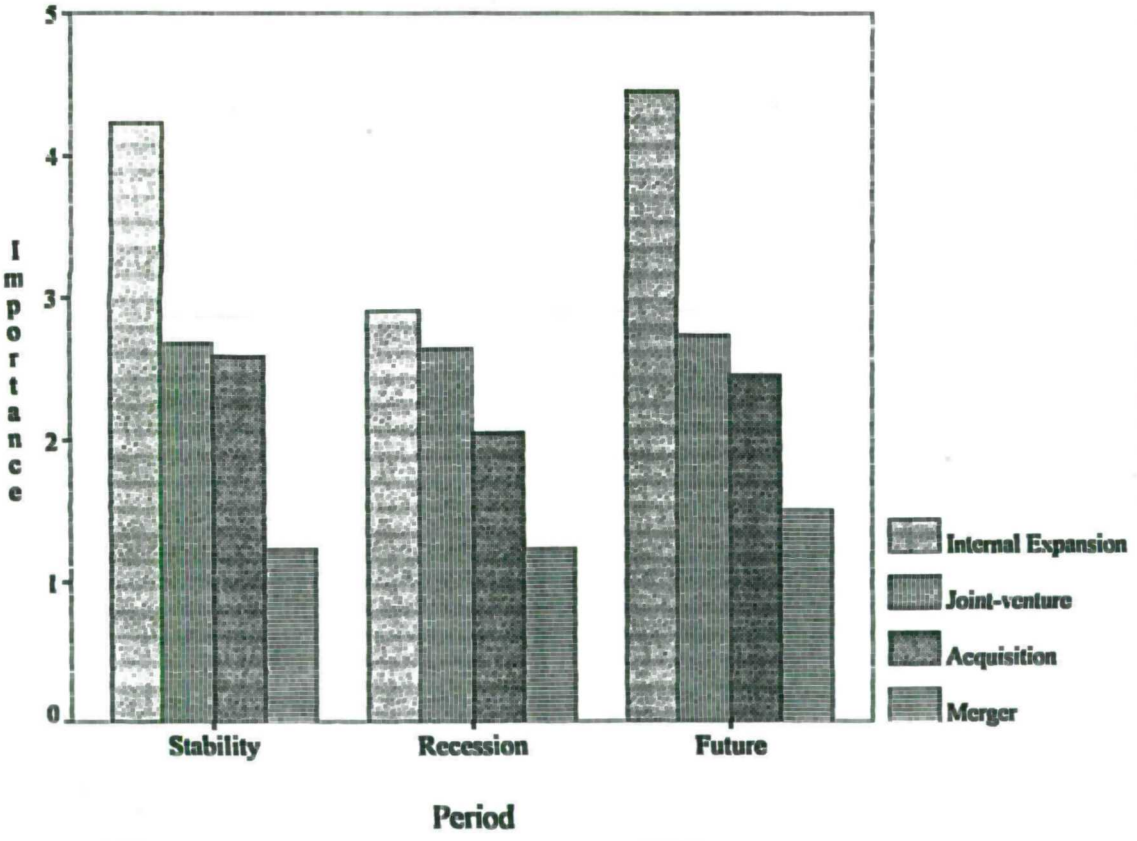


Figure 8.161 - Method Strategy



recession, followed by focus on core business and offering financial packages. The trend for the future was perceived by the respondents as similar to the trend of the boom period and with higher values of importance.

8.4.04 Diversification Strategy

There was no activity which was considered as very important for the purpose of diversification throughout the periods of the study as presented by figure 8.163. Housing and property were considered by the respondents as quite important during the boom period. Contracting was regarded as the third important activity in the boom period. Other activities either related or not related to construction were considered as not important. Moving into the period of recession, all activities were considered below the level of quite important. Housing was still the most important followed by contracting. This means that property had become less important during the recession. For the future, housing was again perceived as the most important activity followed by contracting, property and other activities related to construction.

8.4.05 Internationalisation Strategy

The mean values for all continents are very low, that is not exceeding two as shown in figure 8.164. This is because the number of firms which regarded internationalisation into one of these continents as either very important or extremely important were very small as has been described in the frequency analysis. However, this analysis was carried out for the purpose of comparison. It can be seen that Europe has been at the top position throughout the period of study. During the boom period, America was at the second position and Middle East was third. In the period of recession, Asia had become the second most important international market followed by the Middle East which was in the third position. For the future, the respondents perceived that the pattern for the period of recession will remain with minor changes.

Figure 8.162 - Generic Strategy

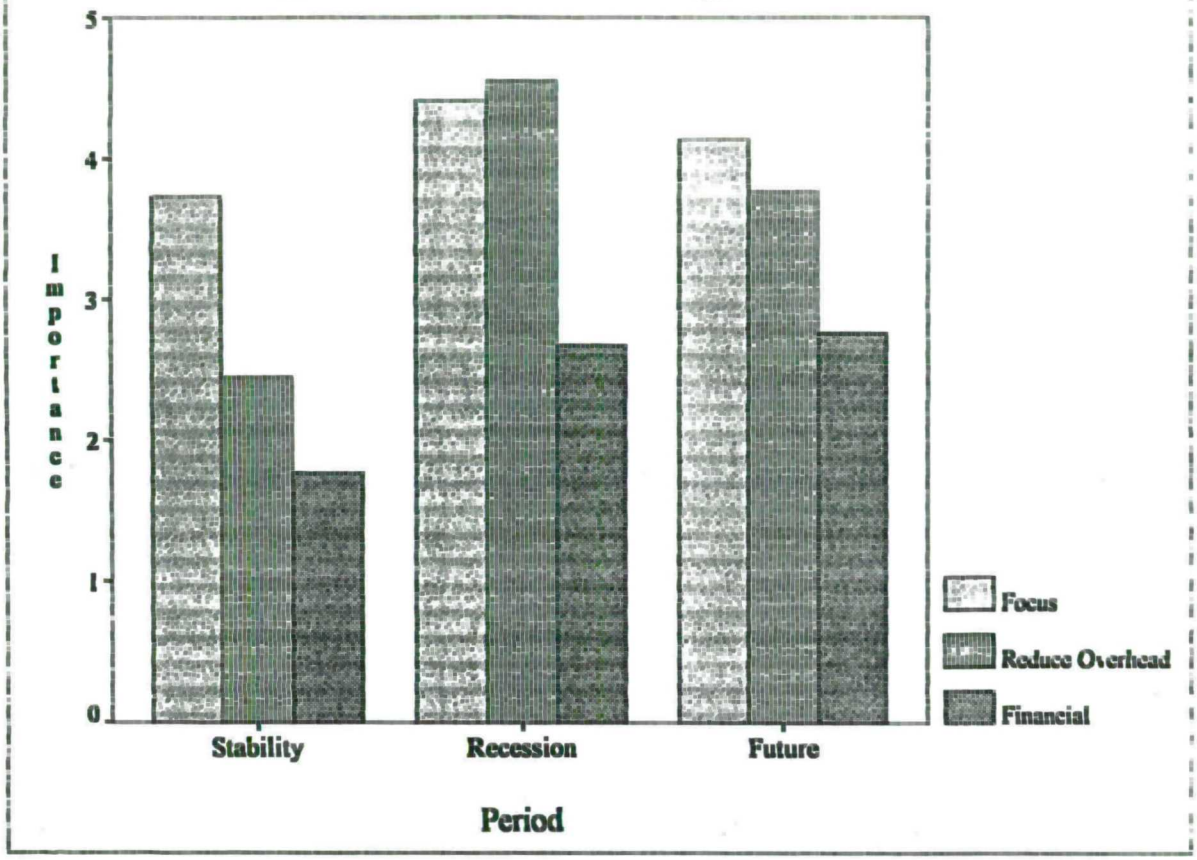


Figure 8.163 - Diversification Strategy

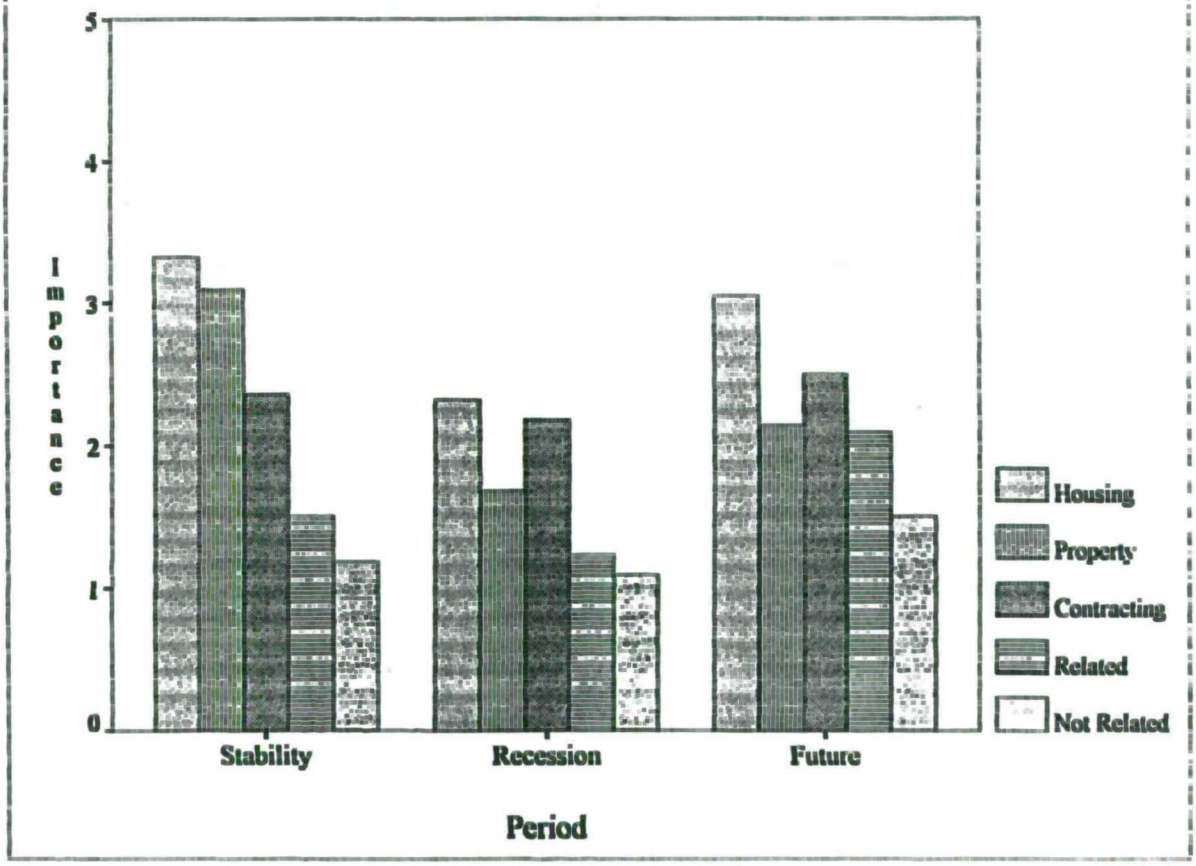
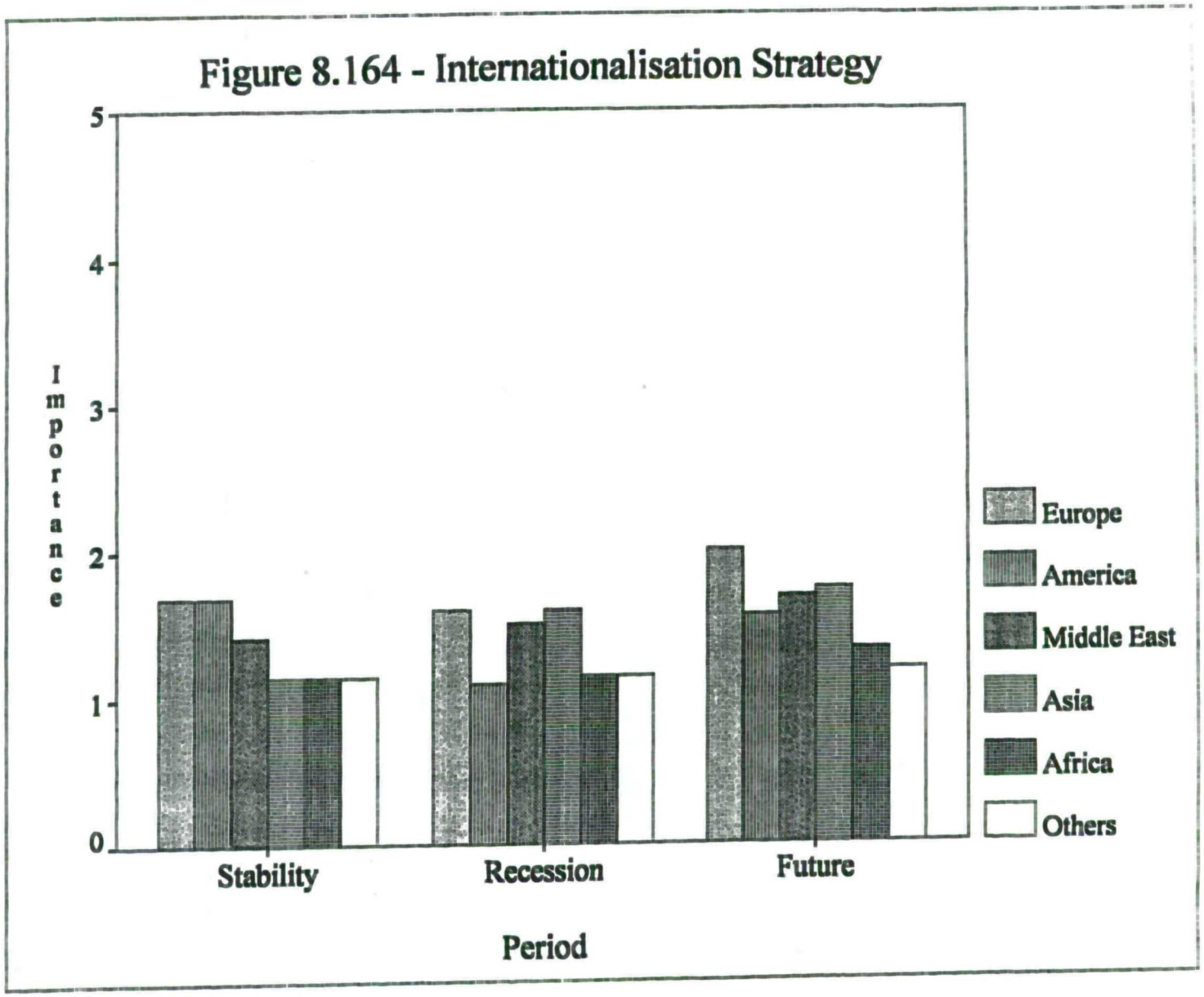


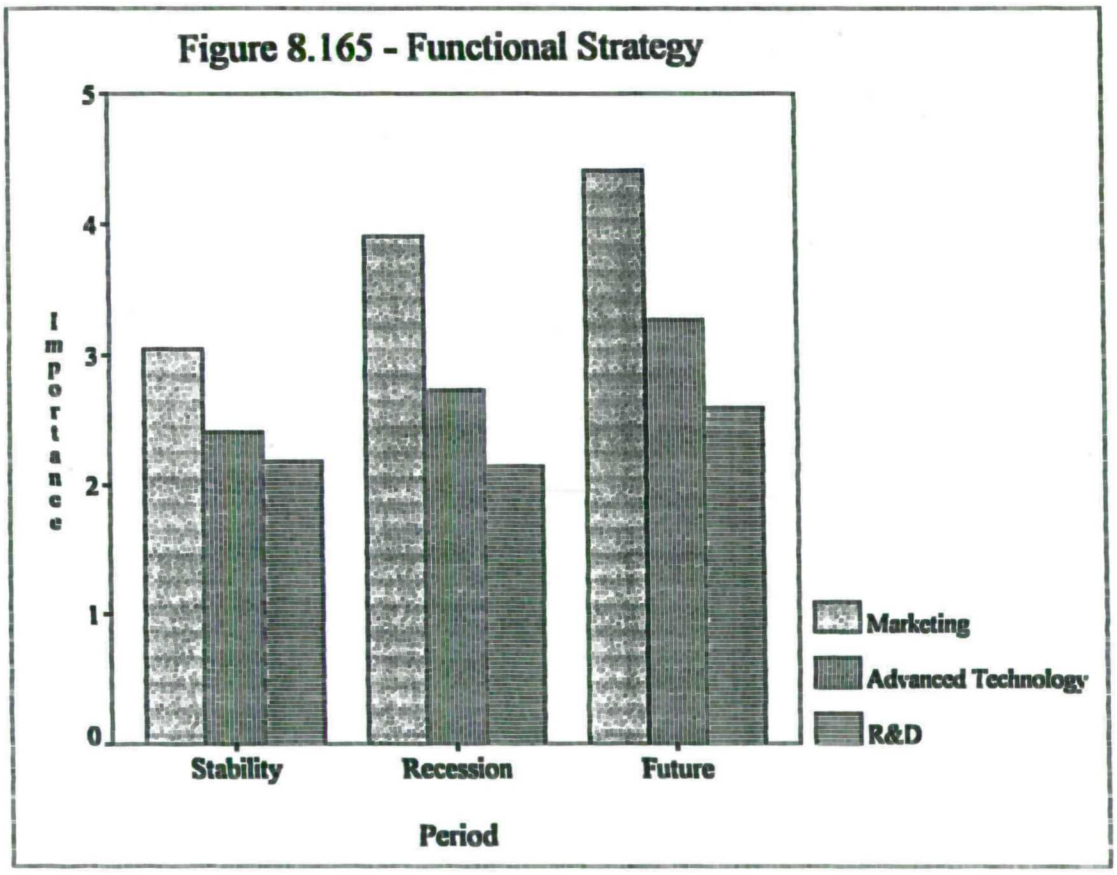
Figure 8.164 - Internationalisation Strategy



8.4.06 Functional Strategies

Figure 8.165 shows a very clear cut trend for functional strategies throughout the periods of the study. Three functional strategies, i.e., marketing, advanced technology and R&D are consistently following the similar trend within the three economic periods. Marketing was leading as the most important strategy followed by the use of advanced technology and R&D. This position remained unchanged but the values of importance were increasing from one period to the next. During the boom period, marketing was considered as quite important and the use of advanced technology and R&D were below that level. However, for the future, marketing was perceived as very important and advanced technology was perceived as quite important.

Figure 8.165 - Functional Strategy



8.4.07 Resource Strategy

Figure 8.166 displays the mean values of six strategic resources which keep changing throughout the three periods. In the first period (the boom) the order of importance was as follows: borrowing; land bank; skilled workers; management; rights issues; and own plant. However, in the second period (the recession) management was the most important resource followed by borrowing, skilled workers, land bank, rights issues and own plant. In the third period (future) skilled workers is the most important followed by management expertise, borrowing, land banks, rights issues and own plant. Throughout the three periods, the three most important resources are borrowing, management and skilled workers.

8.4.08 Financial Performance Measurement

The importance of financial performance indicators were changing from one period to the other as displayed in figure 8.167. In the first period (the boom) pre-tax profit was the most important indicator, followed by cash flow and the other indicators. During the second period (recession) cash flow became the most important indicator and pre-tax profit was the second most important. An interesting observation is that gearing had risen from the fifth position into the third place during the recession. Another observation is that turnover was regarded as the least important indicator during the recession. In the third period (future) cash flow and pre-tax profit were still at the top positions, followed by ROCE, gearing, ROSF, liquidity ratio and turnover.

Figure 8.166 - Resource Strategy

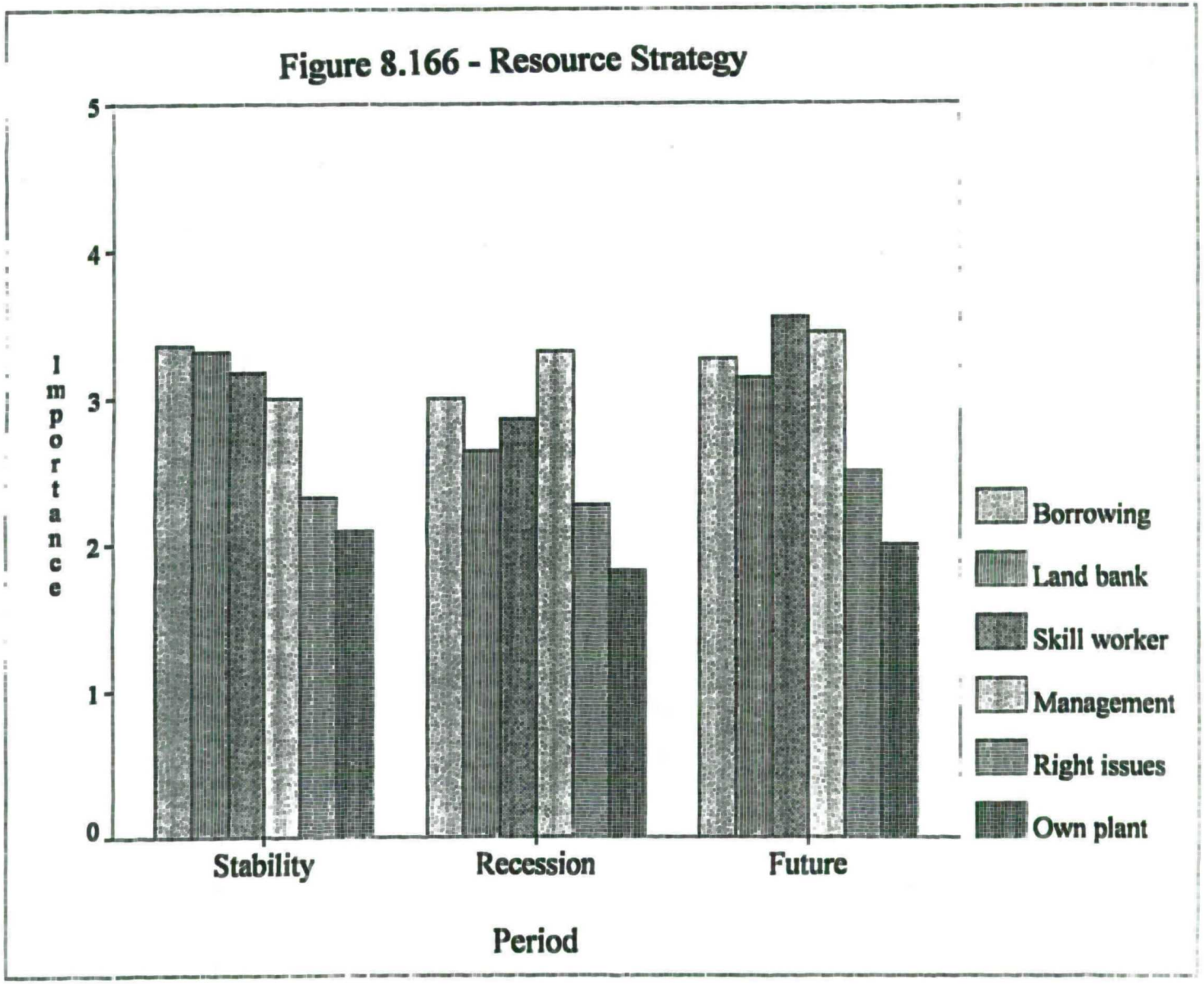
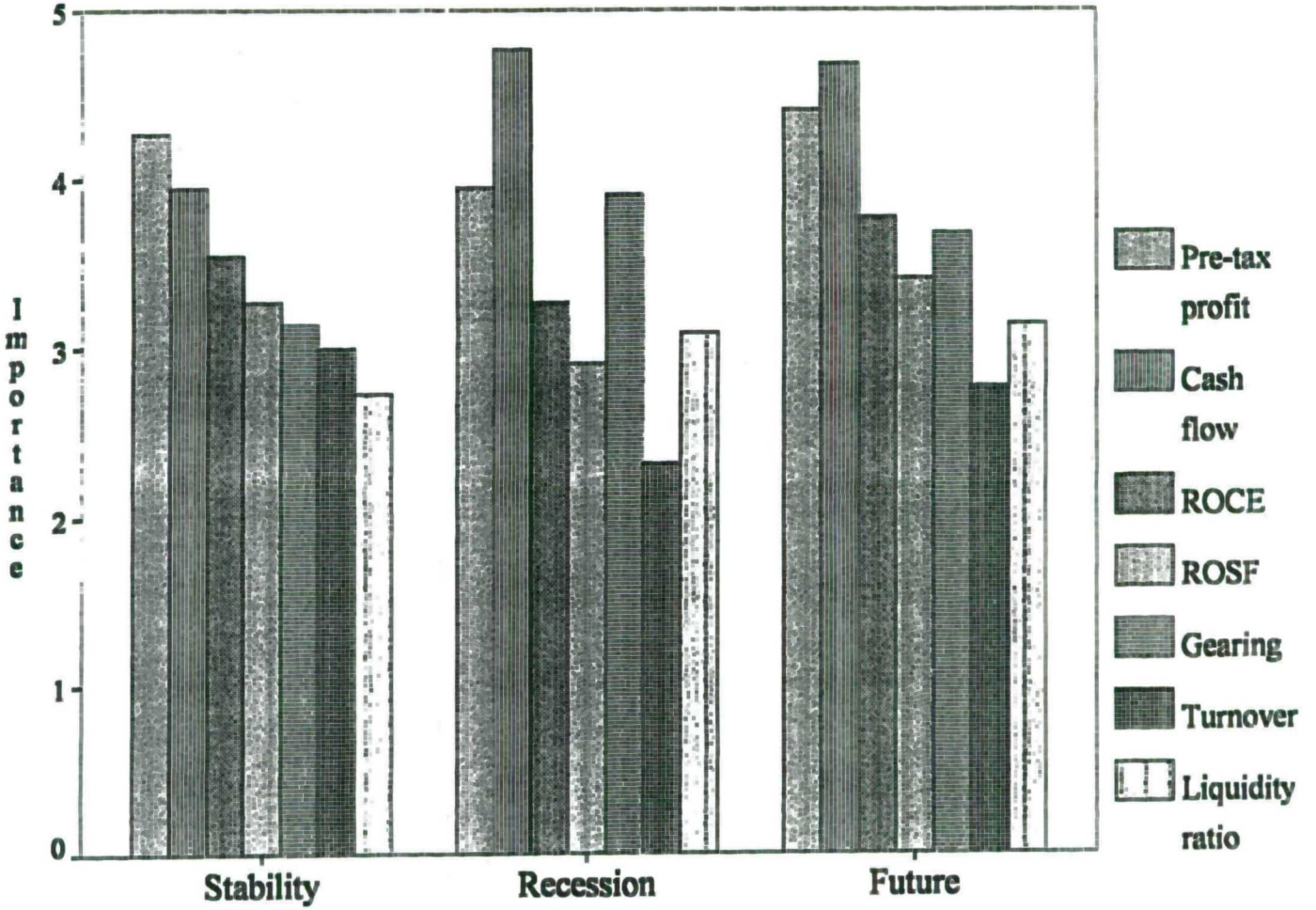


Figure 8.167 - Financial Performance Measurements



8.4.09 Profit Determinants

The respondents were asked to rank the importance of six profit determinants as demonstrated in figure 8.168. Two spectacular trends are observed throughout the periods of the study. Firstly, market condition is the most important profit determinant in all periods. Secondly, cost control is the least important profit determinant during the boom period but it suddenly rose up to the second most important position during the recession and for the future. Two other important determinants were the type of activities and the competition.

8.4.11 Loss Determinants

It is interesting to observed that loss determinants were quite different from the profit determinants as shown by figure 8.169. Loss determinants were considered as not important by the respondents because they did not incur any loss during the economic boom. However, the order of importance of the determinants in the boom period was as follows: type of activity, cost control, market condition, site productivity, geographical spread and competition. In the second period (recession) market condition was again at the top position followed by type of activities, competition and geographical spread. Cost control and site productivity were not considered as the important determinants during the recession. For the future, the respondents predicted the same determinants as in the second period will remain but the degree of importance of all the determinants will be lower. It should be noted that many respondents gave remarks that they did not expect to incur any loss for the future.

Figure 8.168 - Profit Determinants

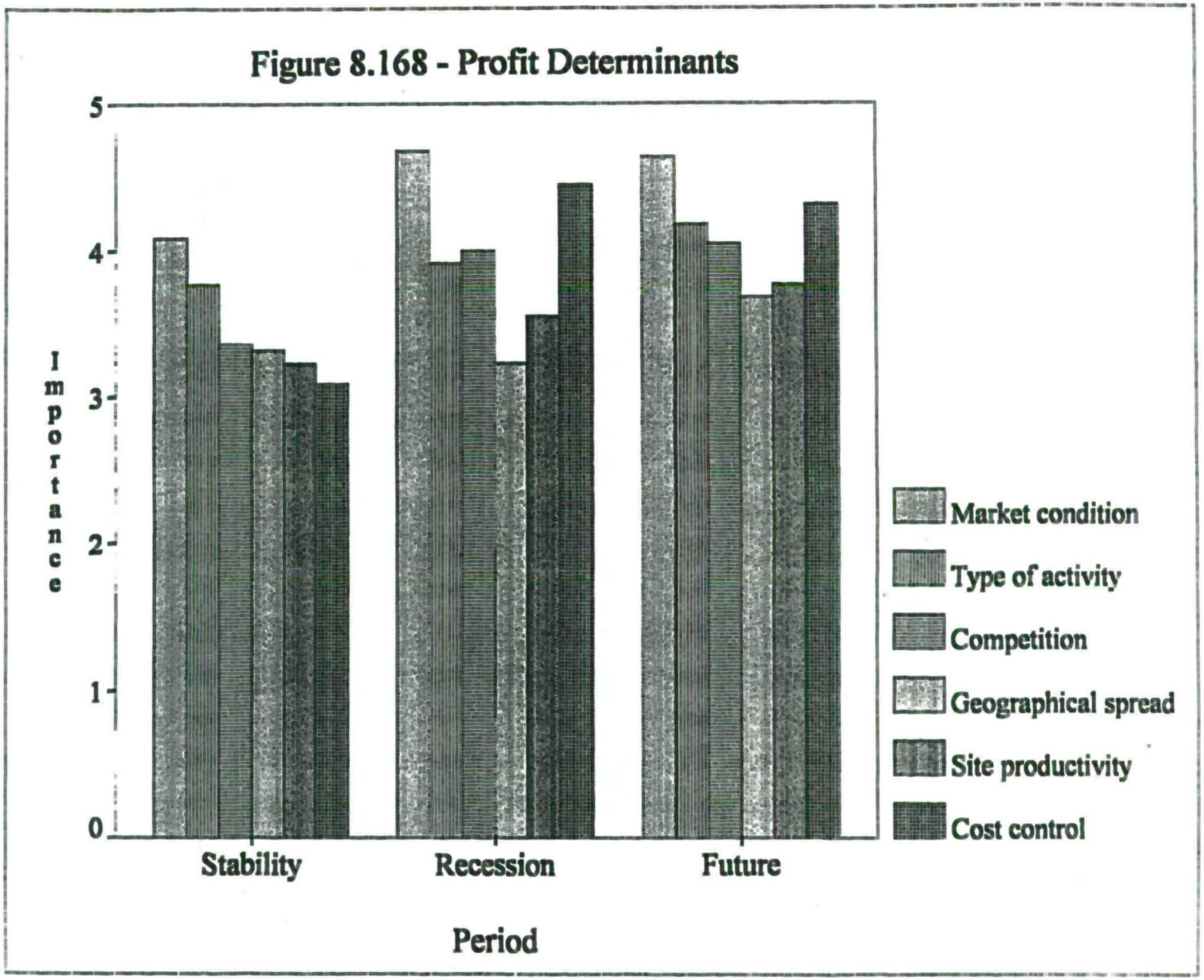
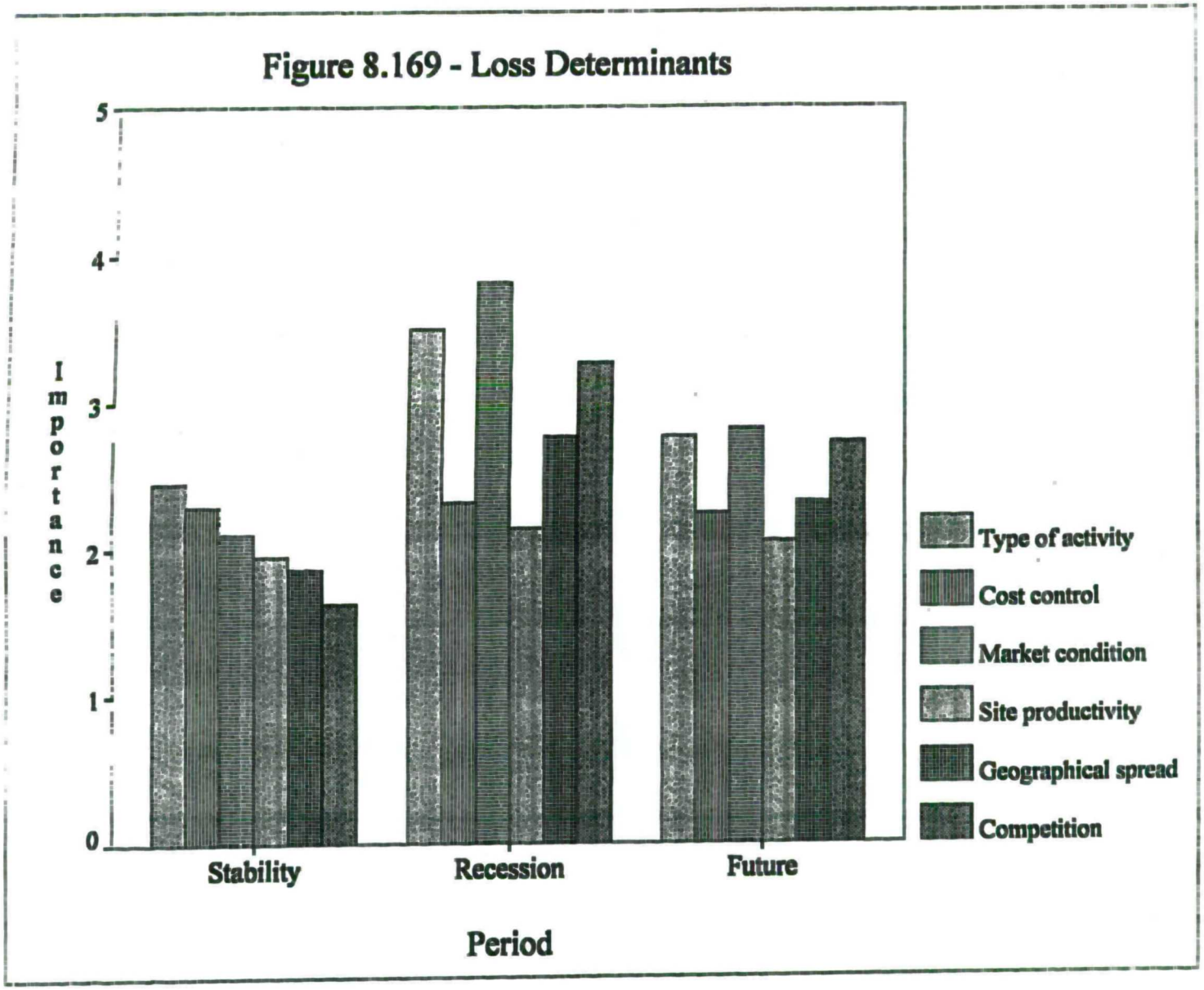


Figure 8.169 - Loss Determinants



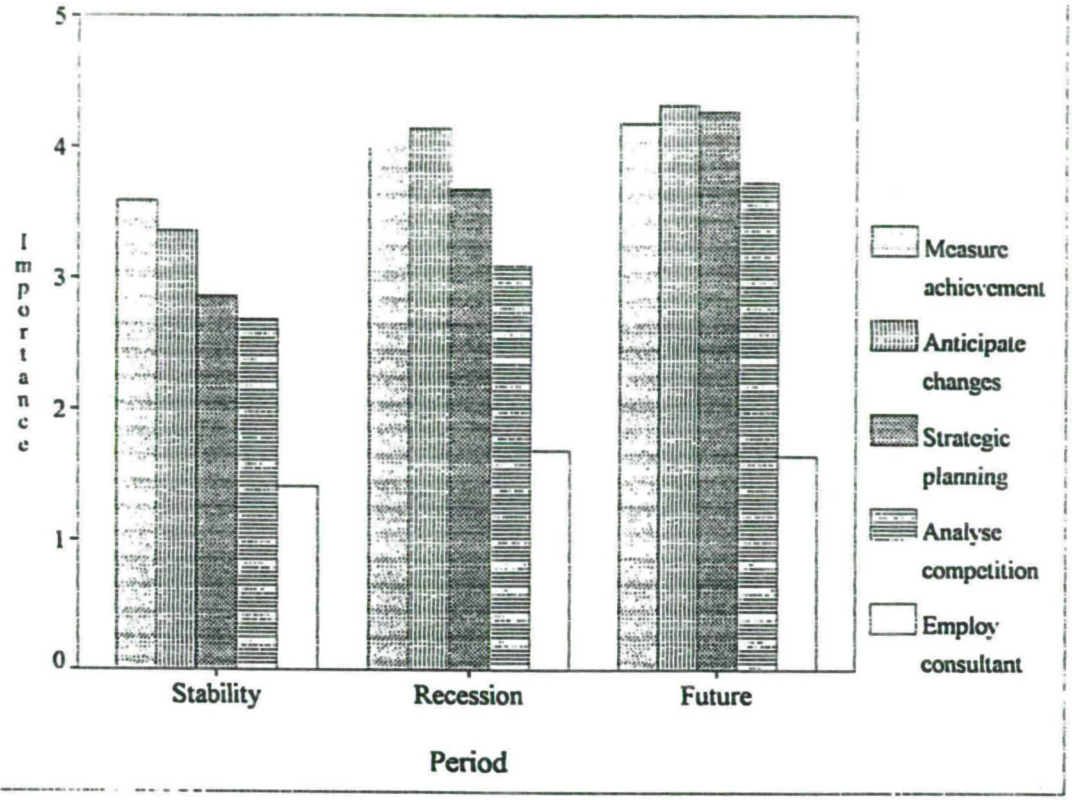
8.4.12 Strategic Management Practice

During the boom period, most of the strategic management practices had around three points which meant quite important (see figure 8.170). Measuring achievements was the most important practice, followed by anticipating changes. Strategic planning was in the third position and analysing competition was the fourth. Employing external consultants was the least important practice. During the period of recession measuring achievement became slightly less important than anticipating changes. However, the overall values of all practices are higher than the previous period. For the future, anticipating changes remains at the top position, followed by strategic planning, measure achievement and analysing the competition.

8.5 Summary

This chapter has analysed construction firms' strategies during the three different periods, that are the boom, the recession and the future. It can be said that the level of the industry's awareness pertaining the market conditions and strategic management has tremendously increased during and after the recession. Further discussion for the analysis of data in this chapter will be continued in chapter 9 part 2.

Figure 8.170 - Strategic Management Practice



CHAPTER 9

FINDINGS AND DISCUSSION

9.1 Introduction

This chapter will be divided into two parts: findings; and discussion. The first part deals with the findings of the research that is to explain whether the hypotheses which were developed in chapter 1 have been validated or not by the data analyses in chapters 7 and 8. In the second part, the findings will be discussed and analysed in relation to the research questions and the hypotheses.

9.2 Findings

9.2.1 The relationship between the firms' competitive strategy and their financial performance

Three hypotheses have been developed in relation to the relationship between the firms' competitive strategy and their financial performance:

Hypothesis 1: Housing activity is likely to generate the highest level of profits but the lowest level of positive cash flow. On the other hand, it is contracting which is likely to generate the highest level of positive cash flow but a lower level of profit.

The results of the correlation analysis (refer table 7.10) show that there is a correlation between housing activity and ROCE. However this relationship occurred only in the period of economic boom that was from 1986 to 1988. It implies that there is no relationship between ROCE and housing activity in the period of recession.

Further verification by analysis of variance supports the results of the correlation analysis (refer table 7.16). Type of activity did affect ROCE in three consecutive years during the boom, i.e., from 1986 to 1988. Figure 7.07 shows that housing activity has the higher level of ROCE than contracting and diversified activity. However, in 1989, when the economic down-turn began, ROCE of housing activity started to fall and reached the point which was lower than contracting activity in 1990. It rose again in 1991 but then dropped again in 1992. It was believed that the increase of ROCE in 1991 was due to the selling of land bank and not from the ordinary business of house selling. Therefore, it can be summarised that housing activity has the highest level of profits only during the boom.

Regarding the cash flow (see figure 7.10), the results of the correlation analysis show that contracting has a negative relationship with current ratio but a positive correlation with quick ratio. On the other hand, housing has a positive correlation with current ratio but a negative one with quick ratio. It should be noted that current ratio consisted of cash, stock and work in progress whilst quick ratio consisted of cash only. Therefore, it was contracting which had the positive correlation with quick ratio that generated the higher positive cash flow.

Further validation by analysis of variance confirmed that type of activity did affect the current and quick ratios of a firm (refer table 7.18 and table 7.19). Figure 7.09 displays that housing has the highest current ratio throughout the period of study. Property is close at the second position, followed by contracting and diversified activity. However, figure 7.10 shows that contracting has the higher quick ratio than diversified and housing. Property had the higher quick ratio than contracting in 1986 and then it dropped continuously until 1990. It rose again in 1991 and then dropped back in 1992. Therefore, it can be concluded that contracting had consistently been the highest cash flow generator throughout the periods of the study.

As a summary, it was found that housing activity generated the highest level of profit in the boom but with the lowest positive cash flow. On the other extreme, contracting had been the highest generator of positive cash flow but with a lower level of profit.

Hypothesis 2: The extent of diversification and the extent of internationalisation are likely to be the main determinants of the size of a construction firm's turnover.

Correlation analysis was used to identify the relationship between internationalisation and turnover. Table 7.10 clearly shows that strong positive correlation exists between internationalisation and turnover from 1987 to 1992. The results indicate that a firm with a bigger volume of work overseas will have a bigger turnover. Meanwhile, type of activity and level of gearing does not have any correlation with turnover. Therefore, the results supported the hypothesis which proposed that the extent of internationalisation is likely to increase the size of a construction firm's turnover.

The results of analysis of variance also exhibit the strong causal relationship between the extent of internationalisation and the size of turnover. Table 7.20 displays very high values of F and significance of F for the extent of internationalisation which indicate that the relationships are very strong throughout the period of study. Figure 7.12 exhibits the fact that firms with a high percentage of overseas work in relation to their total turnover have the highest turnover ranging from £1000 million in 1986 to more than £3000 million in 1990. Firms with medium and low degree of internationalisation have their turnover between £1000 and £2000 million. On the other extreme, firms which do not have overseas work at all remain at the bottom may be not more than £20 million throughout the periods of the study.

Table 7.20 also shows the causal relationship between the extent of diversification and firms' turnover from 1986 to 1992 (except 1991). Further clarification is displayed by figure 7.11. It depicts that firms' with high levels of diversification have the biggest turnover of more than £1000 million from 1987 to 1989. By 1990, this amount rose to more than £2000 million which testify to the importance of high diversification to increase the size of turnover. The rest of the firms had lower than £1000 million in turnover. As a summary, the empirical findings support the hypothesis which states that the extent of internationalisation and the extent of diversification are likely to be the main determinants of the size of a construction firm's turnover.

Hypothesis 3: A firm with a high level of gearing tends to be at risk of failure during an economic slump.

Two tests were conducted to verify this hypothesis these were correlation analysis and analysis of variance. The results of the correlation analysis are displayed in table 7.10. It exhibits that other than the housing activity, gearing is the only strategic variable which has correlation with ROCE and ROSF. Gearing and ROCE had a positive correlation in 1986. This relationship indicates that a firm with a high level of gearing tends to have a high level of ROCE. This relationship did not exist from 1987 to 1990. In 1991 and 1992, the correlation coefficients between gearing and ROCE had changed into negative. The negative correlation means that a firm with a high level of gearing will have lower level of ROCE.

Gearing and ROSF also had positive correlation coefficients during the boom as displayed by Table 7.10. However, when the economic turned-down the correlation coefficients had changed into negative. The results testify that a high

level of gearing is favourable only during the economic boom. When the economic condition is bad, a high level of gearing is disastrous to a firm's profitability.

The results of the analysis of variance of ROCE by gearing are shown by table 7.16 and figure 7.06. Except for 1987 and 1988, table 7.16 shows that the level of gearing did affect ROCE for the period of 1986 to 1992. Figure 7.06 displays that the level of gearing of more than 75.01% generated ROCE with values from 25% to 45%. However, in 1990, this level of gearing ended with ROCE with values at -10% which was the lowest. Those firms which have gearing of not more than 75.00% are more stable. They started with ROCE from 15% to 25% which was slightly lower but then remained steadily and ended slightly above 0% which indicated that they were just in profit.

The results of the analysis of variance of ROSF by gearing are displayed by table 7.17 and figure 7.08. Table 7.17 shows that the level of gearing had a strong effect on ROSF in 1986, 1987, 1988 and 1991. Figure 7.08 demonstrates the effects of the level of gearing upon ROSF. The firms with the highest level of gearing, i.e., more than 100%, yielded the highest ROSF which is more than 70% in 1986. However, by 1992, this group's performance was at the bottom (nearly -40%). In contrast, those firms which were geared not more than 25% produced the highest ROSF in 1992.

It can be seen that a high level of gearing tends to generates a high level of profit (either ROCE or ROSF) during the period of economic boom (1986 to 1989). However, in the economic slump (1990-1992), a high level of gearing tends to produce the lowest level of profits. Therefore, both analysis of variance of ROCE and ROSF support the hypothesis which states that a firm with a high level of gearing tends to fail during an economic slump.

9.2.2 The Appropriate Construction Firms' Strategies Within The Three Different Economic Periods.

Four hypotheses (hypotheses 4 to 7) had been developed in relation to the second research question: what were the appropriate construction firms' strategies within the three different economic periods.

Hypothesis 4: Except in recession, expansion is likely to be the most important direction strategy for the construction firms. Expansion is likely to be pursued by internal expansion and acquisition. The main generic strategy is likely to be "focus on core business".

Three direction strategies were asked in the questionnaire to be ranked by the respondents: expansion, status-quo and retrenchment. The frequency analysis shows that during the boom it is very obvious that expansion was the most important strategy (see figure 8.001, 8.004 and 8.007). During the recession, it seemed that retrenchment was the most important direction strategy (refer figure 8.002, 8.005 and 8.008). The respondents predicted that, for the future, expansion would again be the most important direction strategy (see figure 8.003, 8.006 and 8.009).

To reinforce the above findings, figure 8.160 shows the comparison of means of all direction strategies. During the boom, expansion was considered as very important whilst status-quo and retrenchment were considered as not important. However, during the recession, expansion was regarded as not important whilst retrenchment was stated as quite important. In the third period, expansion was perceived as quite important whilst status-quo and retrenchment were not important.

As a summary, it can be said that expansion is likely to be the most important direction strategy during the boom. However, when the economy turn soft, retrenchment is likely to be the most important direction strategy.

Concerning method strategies figures in table 9.1 show the fact that internal expansion is consistently considered as the most important method strategy for a firm's expansion. Figure 8.161 also displays a spectacular pattern of method strategy whereby internal expansion is the most important method in all periods, followed by joint-venture, acquisition and merger. It should be noted that the mean value of internal expansion for the future is higher than the mean values of the previous periods. As a summary, it can be said that internal expansion is consistently the most important method strategy for expansion in any period of economic condition.

Table 9.1 - Figures supporting internal expansion as the main method strategy

Figure	Page
8.010, 8.011, 8.012	215
8.013, 8.014, 8.015	217
8.016, 8.017, 8.018	217

The second most important method strategy was found to be joint venture instead of acquisition. This was also consistent throughout the three periods of the study. Acquisition was regarded as the third important method strategy while merger was at the last position. Merger was consistently regarded as not important by the whole respondents.

Three generic strategies: focus on core business; reduce fixed costs and overheads; and offer financial packages were asked in the questionnaire survey.

During the boom, figure 8.022, 8.025 and 8.028 exhibits that focus on core business was the most important basis for the firms' competitive expansion. However, in the second period, their perceptions changed dramatically when all of the firms' considered reduced fixed costs and overheads as either very important or extremely important (see figure 8.026). Moving into the third period, focus on core business was again regarded as the most important generic strategy.

The above findings are summarised by figure 8.162 which shows that the importance of all generic strategies were increasing from the boom into the recession. However, reduce fixed costs and overheads was the most important strategy during the recession. The respondents perceived that focus on core business would be the most important generic strategy for the future.

The above findings supported the hypothesis to a certain extent. The results indicated that expansion was the most important direction strategy during the boom but not during the recession which needed retrenchment. Internal expansion was the most important method at all periods. The basis of their competitive expansion would be either focused on core business during the strong economic condition or reduce fixed costs and overheads during the weak economic condition.

Hypothesis 5: Housing activity is likely to be the most important choice in the construction firms' diversification strategy. Europe is likely to be the biggest market outside the UK.

Five activities were chosen to be included in the questionnaire: contracting, housing, property, other activities related to construction and other activities not related to construction. Tables 8.031, 8.034, 8.037, 8.040 and 8.043 display the results of the boom which indicate that housing was the most favoured activity for diversification

purposes. Property was the second important activity and followed thirdly by contracting. It was clear that other activities either related or not related to construction were considered as not at all important for diversification purposes.

During the period of recession all activities had the left skewed frequency distribution as displayed by figure 8.032, 8.035, 8.038, 8.041 and 8.044. Relatively, housing was still considered as the most attractive venture. The respondents perceived that, for the future, housing would be the most profitable business compared to contracting and the rest of activities as depicted by figures 8.033, 8.036, 8.039, 8.042, and 8.045.

The comparison of means of diversification strategy is shown by figure 8.163. It confirmed the above findings that housing was the most important activity for diversification purposes in all of the three periods. However, it was only rated as quite important which means that it was not crucial for the firms. During the boom, property was in second place but it moved into third place during the recession and for the future. Contracting was rated as the third important activity during the boom but rose to the second position during the recession and for the future. The rest of the activities, which were other activities related to construction and other activities not related to construction were considered as not important being in fourth and fifth position.

As a summary, it can be concluded that housing is relatively the most important activity throughout the three periods.

There were six continents included as part of the enquiry about Internationalisation strategy: America, Asia, Africa, Middle East and other continents. Figures 8.049 to 8.063 show that the majority of the respondents did not consider any

of these continents as important for their internationalisation strategy. In all figures at least twelve firms considered that none of these continents was at all important. This indicates the poor involvement of the respondents in the international market.

Figure 8.164 reflects the lack of involvement of the respondents in the world market. The charts show that none of the continents scored more than two point which means not important. This is because the number of firms which go abroad is very small and therefore the mean values become small. However, relatively it can be seen that Europe and America have equal scores, then followed by Middle East during the boom. During the recession, Europe was the most important market and Asia was the second most important. This pattern did not change for the future as perceived by the respondents. Therefore, it was found that overall Europe is relatively the most important market outside the UK.

As a summary the above findings supported the hypothesis which stated that housing is likely to be the most important activity for diversification purposes while Europe is likely to be the biggest market outside the UK.

Hypothesis 6: Marketing is likely to be considered as more important than R&D and advanced technology. In terms of resources, management is likely to be the most important resource.

Figures in table 9.2 show that marketing is clearly more important than R&D and advanced technology. For instance, thirteen respondents perceived marketing as extremely important for the future. This number was much greater than advanced technology and R&D, which had five and two respondents respectively who regarded them as extremely important.

Table 9.2 - Figures supporting marketing
as the main functional strategy

Figure	Page
8.064, 8.065, 8.066	231
8.067, 8.068, 8.069	233
8.070, 8.071, 8.072	233

Figure 8.165 shows the comparison of means between these three strategies. It can be seen that the frequency distribution pattern was not changing within the periods even though the values of importance were increasing. Marketing was considered as the most important, followed by advanced technology and R&D.

These findings support the hypothesis which states that marketing is considered as relatively more important than R&D and advanced technology.

Six main resources were considered in the questionnaire survey: management, skilled workers, borrowing, rights issues, own plant and land bank. Figures in table 9.3 show the frequency distribution of all the resources. It can be seen that the pattern of the frequency distribution keeps changing from one period to the other. Figure 8.166 shows the comparison of means of all the resources. During the boom, borrowing was the most important resource and was followed by land bank, skilled workers, management, rights issues and own plant. In the period of recession, management was at the first position in front of borrowing, skilled workers, land bank, rights issues and own plant. Moving into the third period, skilled workers were considered as the most important resource before management, borrowing, land bank, rights issues and own plant.

The findings are interesting and support the hypothesis partially. Management was regarded as the most important resource only during the recession. Borrowing was considered as the most important resource during the boom whilst skilled workers were perceived as the most important one for the future.

Table 9.3 - Frequency distribution of all resources

Figure	Page
8.073, 8.074, 8.075	235
8.076, 8.077, 8.078	235
8.079, 8.080, 8.081	237
8.082, 8.083, 8.084	237
8.085, 8.086, 8.087	238
8.088, 8.089, 8.090	238

Hypothesis 7: Pre-tax profit is likely to be the most important financial performance measurement followed by cash flow. The financial performance of a construction firm is likely to be more affected by the economic condition rather by its own strategies.

During the period of economic boom, pre-tax profit was considered as the most important financial performance measurement as displayed by figure 8.091. Eleven firms regarded pre-tax profit as extremely important and eight firms regarded it as very important. However, in the period of economic slump, cash flow was clearly the most important financial performance indicator as displayed by figure 8.101. The spectacular trend of the cash flow continued for the future when the respondents perceived that it was also the most important financial indicator as depicted by figure 8.102.

Figure 8.167 confirms the above observations whereby pre-tax profit was the most important in the first period whilst cash flow was the most important one in the second and third periods. Another interesting observation is that regarding the gearing which became one of the most important indicators during the recession as shown by figure 8.167. Therefore the findings partially supported the hypothesis.

As a summary, it can be said that pre-tax profit was the most important financial performance measurement during the boom. However, it was cash flow that was regarded as the most important financial performance indicator during the recession and for the future.

Eight profit determinants were asked in the questionnaire survey: type of activity, geographical spread, market condition, competition, site productivity and cost control. Figures 8.115, 8.116 and 8.117 clearly exhibit the fact that market condition is the most important profit determinant within the three periods. Figure 8.168 also shows that market condition is the most important profit determinant. The interesting point is that cost control, which was considered the least important determinant during the boom, became the second most important determinant after the market condition during the period of recession.

The same eight profit determinants were also considered with regard to loss determinants. The results were quite different because during the boom, the market condition was good and the respondents were all profitable. Therefore, in this period, market condition could not be considered as the loss determinant. During the boom, type of activity and cost control were regarded as more important than the market condition as the loss determinants as displayed by figures 8.127, 8.142 and 8.133. However, in the period of recession, market condition was again considered as the

most important loss determinant in front of type of activity and competition as depicted by figures 8.134, 8.128 and 8.137. It seems that for the future market condition would be the most important loss determinant as displayed in figure 8.135. Figure 8.169 shows the comparison of means of the loss determinant which confirms the above observation.

As a summary, it can be stated that the market condition is more important than a firm's strategies in determining the firm's financial performance.

9.3 DISCUSSION

This discussion should be considered as a synthesis of interesting findings leading to the identification of: (a) the relationship between the firms' competitive strategies and their financial performance; and (b) the appropriate construction firms' strategies within the three different economic environments.

9.3.1 The Relationship Between The Firms' Competitive Strategies and Their Financial Performance

(Hypothesis 1): It was found that the housing activity was the most profitable business activity in the period of economic boom. However, during the recession the housing activity generated the lowest level of profitability. Regarding cash flow, it was found that the contracting activity had generated the highest level of cash flow throughout the period of study but a lower level of profit. The housing activity, on the other hand, had the highest level of current ratio which included cash, land bank, work in progress and stocks.

Tables 9.4 and 9.5 display turnover and profit of two major construction firms i.e., Tarmac plc and John Laing plc which have been selected as examples to assist the discussion. In table 9.4, it can be seen that housing had the highest profit that is £209.0 million or 26.6% whilst contracting had only £23.3 million or 3.4%. The trend continued into 1989 which did not show any significant change. Moving into 1990, the contracting sector's profit remained at 3.4% but the housing sector's profit decreased significantly to 7.9%. In 1991 both experienced further decrease in their profitability. However, in 1992, whilst contracting sector's profit was still positive at £14.5 m or 1.5%, housing sector's profit had recorded a loss of £33.4 m or 5.1%. Properties, industrial products and building materials had also recorded losses in 1991.

Table 9.5 also shows a similar pattern in that the housing activity's profit is the highest in 1988 with £51.0 or 17.7%. However, housing activity incurred a loss of £-2.8 million in 1991. Construction, on the other hand, generated £20.8 million or 2.2% of profit in 1988 and then continued quite consistently throughout the period of study. These examples support the empirical results which states that housing tend to generates the highest profits during the period of economic boom. What is important for construction firms to consider is to be alert and to take immediate action when they receive any clue of economic downturn. This action may include selling off land banks and reducing the capacity of production. According to Hutcheson (1993) a firm needs to have warning mechanisms to appreciate and to react to economic changes before they occur.

Table 9.4 - Turnover and Profit of Tarmac plc

ACTIVITY	YEAR									
	1988		1989		1990		1991		1992	
	Turnover (£ m)	Profit (£ m) (%)	Turnover (£ m)	Profit (£ m) (%)	Turnover (£ m)	Profit (£ m) (%)	Turnover (£ m)	Profit (£ m) (%)	Turnover (£ m)	Profit (£ m) (%)
Construction	682.7	*23.3* *3.4*	920.3	*30.8* *3.4*	1180.9	*40.0* *3.4*	1084.6	*22.7* *2.1*	978.0	*14.5* *1.5*
Housing	786.4	*209.0* *26.6*	920.0	*183.5* *20.0*	851.9	*67.3* *7.9*	744.6	*27.3* *3.7*	650.6	*-33.4* *-5.1*
Quarry	485.9	*86.1* *17.7*	584.4	*100.3* *17.2*	633.0	*80.0* *12.6*	544.9	*42.8* *7.9*	506.1	*19.1* *3.8*
Building material	137.2	*25.4* *18.5*	143.9	*29.3* *20.4*	126.9	*17.0* *13.4*	116.0	*1.4* *1.2*	105.8	*-2.9* *-2.7*
Industrial products	369.9	*29.1* *7.9*	493.5	*44.8* *9.1*	514.5	*38.0* *7.4*	308.2	*5.5* *1.8*	308.1	*-9.0* *-2.9*
Properties	70.1	*15.1* *21.5*	74.9	*21.3* *28.4*	52.3	*12.7* *24.3*	Business sold or terminated	*-9.1*	Business sold or terminated	*-2.1*
Exceptional item								*-1.8*		*-264.5*

Table 9.5 - Turnover and Profit of John Laing plc

ACTIVITY	YEAR									
	1988		1989		1990		1991		1992	
	Turnover (£ m)	Profit (£ m) (%)	Turnover (£ m)	Profit (£ m) (%)	Turnover (£ m)	Profit (£ m) (%)	Turnover (£ m)	Profit (£ m) (%)	Turnover (£ m)	Profit (£ m) (%)
Construction	941.3	*20.8* *2 2*	994.7	*25.9* *2.6*	1225.6	*27.9* *2.3*	1294.8	*21.8* *1.7*	1081.2	*25.1* *2 3*
Housing	288.7	*51.0* *17.7*	264.1	*33.3* *12.6*	197.1	*5.8* *2.9*	152.5	*-2.8* *-1.8*	178.2	*4.8* *2 7*
Property	60.0	*1.1* *1.8*	23.5	*3.2* *13.6*	14.6	*-3.1* *-21.2*	11.7	*-3.9* *-33.3*	10.1	*0.2* *2 0*
Trading & Technology	66.2	*-1.7* *2 6*	80.9	*1.5* *1.9*	92.6	*1.5* *1.6*	127.6	*-2.8* *-2.2*	--	--

This finding implies that a firm which focuses on the private housing development should take full advantage during economic boom and then carefully monitor the economic condition before it becomes too late to react. During economic slump, contracting activity seem to maintain its profitability above the zero level even though it was very small. Therefore, a construction company should diversify and concentrate on contracting activity during the recession period as a means for it's survival. Another activity which they need to avoid or reduce during the harsh economic condition is property development which is also heavily influenced by the economic conditions.

According to Lansley et al (1980) a construction firm's main responses to the recession in 1974 were (as displayed by Table 9.6):

i. to `contain' the effects of the recession on their existing activities (e.g. by increasing their efficiency so as to exploit their existing markets more intensively);
ii. to enter new markets (e.g. undertake new types and sizes of project possibly in new locations); or
iii. to allow their business to shrink.

Regarding cash flow, contracting was clearly producing it throughout the period regardless of the economic conditions. Therefore, contracting activity was again favourable for the survival of a construction firm during the harsh economic climate. For the housing activity, the cash would be tied up in land banks, work in progress and unsold completed houses. The ability to sell land banks before booms go bust and while the price is still acceptable, would increase the liquidity of a company. The property development activity also needs to be treated like the housing activity. To improve the cash position, a number of actions could be taken such as selling the property, reducing the property division capacity or totally withdrawing

from this type of activity. Many major firms made their decisions to withdraw from the property activity too late that was only after they incurred heavy losses.

Table 9.6 - Responses to the Recession

Type of Responses	Examples
a) Entry into new markets	Diversification by moving into new activities or geographical areas, e.g. starting trade subsidiaries, opening new offices, etc.
b) Development of ancillary activities	Developing and expanding activities which previously accounted for small shares of the business.
c) Development of existing main activities	Developing and expanding, or improving the breadth of activities by, for example, undertaking larger or smaller contracts.
d) Containment	Little or no development or shrinkage in activities but an increase in share of falling market.
e) Retrievable Shrinkage	Shrinkage while retaining the character of the business so that it may be easily reversed, for example, reduction in staffing and overhead costs.
f) Irretrievable Shrinkage	Shrinkage which alters the character of the business and which cannot be reversed, for example, closures of sub-offices or sister firms and not maintaining contact with the work.

Source: Lansley et al 1980

It seems that most of the financial problems started by the failure of the construction companies to assess the depth and length of the economic downturn. Therefore, it is necessary to have an instinct for market trends which will enable them to leave the booms before they bust (Hutcheson 1993).

(Hypothesis 2): It was found that the extent of diversification and the extent of internationalisation had determined the size of the firms' turnover.

This result implies that a firm in the UK construction industry has had to diversify its activities and expand its geographical coverage internationally in order to increase the volume of its turnover. This is due to the capacity of the UK construction industry which is relatively limited to supply enough works for the great number of construction firms available. It was interesting to note that a firm which was not diversify and was not expand internationally remains with the smallest turnover. For instance, a firm like North Midland Construction plc which focused its activity on contracting had £12.0 million turnover in 1986 and this amount was not increasing significantly in the later years. This company generated £24.5 million turnover in 1991 that was after the five years of operation since 1986. On the other extreme, there was no major firm operating with one single activity. Tarmac with six activities: quarry products; building products; construction; housing; properties; and oil and industrial produced £1,570.6 million turnover in 1985. Five years later in 1990, its turnover had soared to £3,695.9 million.

Internationalisation initially being considered as a way out for a firm to reduce the effects of the cyclical economic environments. During a recession period, a firm's capacity is under utilised, and this extra capacity is necessary to be channelled

out to overseas market. However, geographical spread (which includes overseas areas) is one of the important growth strategies for a construction company. Bovis, for example, plans to cut its UK workload to just 20% of its £3 billion turnover over the next two years and significantly increase its operations in the Far East and Russia. Bovis has a base in Singapore and operates in Indonesia, Malaysia, Thailand, Taiwan, Korea, Japan and China (Cooper 1993a). Costain, as another example, is set out to gain nearly one-third of the division's turnover from overseas areas this year . It is out to win more work in Hong Kong, Thailand, Malaysia, Vietnam and China, where profit margins are higher than in the UK (Cooper 1993b). However, the nature of the international work, which normally require enormous capital, prevent the smaller firms from venturing into this area of operations.

Therefore, to become big with, the construction companies have to increase their capital and other resources and subsequently enhance their capacity to enable them to compete internationally in bidding for mega projects. Therefore, it is natural that those companies which have their operations bases overseas have the bigger turnover.

(Hypothesis 3) It was found that a firm with a high level of gearing had generated the highest level of profit during the boom but had produced the lowest level of profit during the bust.

The results indicated that firms with high gearing of debt to equity had performed tremendously well during the boom. These firms were expanding their business activities (housing and property development which needed heavy financing) by means of borrowing. These two activities: housing and property developments generated the highest level of profit as has been discussed under hypothesis 1.

However, the demand for housing and property fell dramatically during the deep and long recession and resulted in heavy losses being incurred by these firms. The failure to pay back the heavy borrowings while they were in profit forced these firms into liquidation. One example which could illustrate the effects of heavy borrowing during the recession was Speyhawk which was a property developer (refer table 9.7)

Table 9.7 displays that the profit of the company from property is £20.1 million or 27% of turnover in 1988. When the economic downturn started afflicting the construction industry in 1990, the profit fell to £-3.2 million or -1.4%. The situation became worst in 1991, when the company incurred a heavy loss of £-217.8 million or -369.7% in property which was the main activity of the firm. As a result, it went into receivership in May 1992 while owing £350 million debt as bankers ended their support. This example shows that a firm should not over dependent upon one sector such as property which is vulnerable to the economic changes. A firm which is already in such a position should carefully monitor changes in the economic environments and react promptly by reducing the capacity or withdrawing from the activity.

It is also undesirable for a firm to have a heavy borrowing to finance it's operations. According to Hutcheson (1993) a company fails when it encounters a financial risk which is incompatible with the risk created by the company's gearing ratio. He noted that the risks faced by builders are usually high because their assets are usually illiquid and not marketable at book value and the retention and bank guarantee system locks in a significant proportion of the company's assets. High gearing precludes a company escaping from the pressure of recession because it has no more capacity to borrow to survive. Therefore, there is seldom, if any, uniquely profitable and reliable use for heavy borrowings (Hutcheson 1993).

Table 9.7 - Turnover and Profit of Speyhawk plc

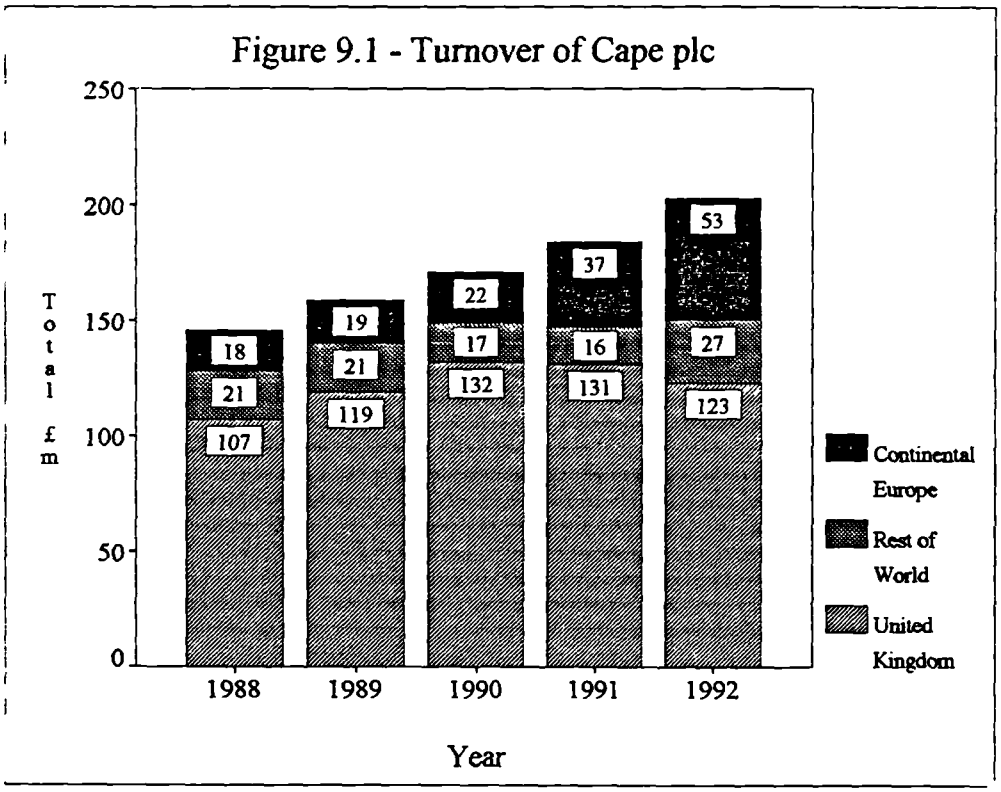
ACTIVITY	YEAR									
	1988		1989		1990		1991		1992	
	Turnover (£ '000)	Profit (£ '000) (%)	Turnover (£ '000)	Profit (£ '000) (%)	Turnover (£ '000)	Profit (£ '000) (%)	Turnover (£ '000)	Profit (£ '000) (%)	Turnover (£ '000)	Profit (£ '000) (%)
Property	73,464	20,115 *27.4*	88,101	24,408 *27.7*	234,032	*-3,193* *-1.4*	58,927	*-217,827* *-369.7*		
Hotel	4,413	*-2,792* *-63.3*	2,594	*-1,729* *-66.7*	--	--	--	--	IN LIQUI	DATION
Construction	--	--	17,547	595 *3.4*	28,723	395 *1.4*	17,510	1,049 *6.0*		

9.3.2 Appropriate Construction Firms' Strategies Within The Three Different Economic Periods

(Hypothesis 4) It was found that expansion was the most important direction strategy during the boom economic period. However, when the economiy turned soft, retrenchment was the most important direction strategy. Internal expansion was consistently the most important strategic method for expansion in any period of economic conditions. Focus on core businesses was the most important generic strategy during the boom while reduce fixed costs and overheads was the most important one during the economic down-turn.

The above findings show that during the period of economic boom, most of the firms were expanding and none of them had regarded retrenchment as an important direction strategy. Status-quo was also considered as not important strategy by the majority of the respondents in this period. Therefore, it was clear that the companies were expanding during the boom economic period. However, during the recession, there was no clear trend that the sample was shrinking. Even though retrenchment was regarded as the most important directional strategy, there were some companies which considered retrenchment as not at all important (refer figure 8.005). In fact, one firm still believed that expansion was an extremely important directional strategy during the recession and the other three firms believed that it was very important. As an example, Cape plc reported that it increased its turnover by concentrating on the development of businesses and acquisitions outside the UK. Figure 9.1 shows the breakdown of Cape's turnover for the period of 1988 to 1992. It displays that while the UK's turnover decreased from £131m (in 1991) to £123m (in 1992), the turnover of the continental Europe and rest of the world increased from £37m to £53m and from £16m to £27m respectively. As a result, Cape's trading performance was strong in spite of the recession and the reduction in operating profit was limited to 14%. It should be noted that 1992 was the worst year for the UK construction

industry during which many major construction companies incurred heavy losses. Therefore, in order to avoid the effects of recession within the local market, a firm should have the ability to expand internationally



Internal expansion was found to be the most preferred method strategy throughout the three different economic periods. Its degree of importance was slightly decreased during the recession but was predicted to be much more important for the future. It means that the importance of acquisition probably would be less important for the future. However, it was joint-venture which followed internal expansion in second position instead of acquisition. This shows an interesting trend within the construction industry which believed and put more emphasis toward internal expansion and joint-venture rather than acquisition and merger. It means that

internal expansion and joint-venture are more reliable methods for the construction firms to expand rather than acquisition and merger. Internal expansion will ensure a firm expand cohesively as one business entity while joint-venture will allow flexibility for a firm to explore a new venture or a new areas. On the other hand, acquisition and merger may create problems of integration between two firms which are trying to be united.

Another aspect of development strategy is generic strategy which place a firm in a competitive position. The findings show that focus in core business is the most important generic strategy during the boom and for the future. For many major firms, focus in core business means focus on one or more activities which include: construction; housing; some other activities related to construction; and a combination of two or more stated activities. For instance, one of Tarmac's main strategies during the recession was to refocus on strong core activities which include: housing; construction and quarry products. This strategy means that Tarmac had decided to withdraw from property development and to close some other peripheral businesses and concentrated their resources to the major activities (housing, construction and quarry products) in this difficult economic period. However, during the recession, reducing fixed costs and overheads was slightly more important than focusing on core business. For the future, this trend shifted again where focus on core business was more important than the others for the future.

(Hypothesis 5) It was found that housing activity was the most important activity for diversification purpose while Europe was the most preferable market outside the UK throughout the period.

The findings show that the respondents believed that housing was the most important activity even during the recession. The fact is that housing was not profitable during the recession as has been discussed under hypothesis 1. Financial figures in table 9.4 and 9.5 display the fact that housing and property development activities were not profitable in the harsh economic condition. Therefore, a firm should diversify into construction rather than housing or property development during the economic recession. However, housing and property are favourable during the period of economic boom.

Outside the UK, Europe was regarded as the most important market by the respondents. This was probably because of it's close location to UK. This market is within the reach of many of the medium size companies. However, a market research should be conducted to investigate the opportunities available and probable profits before a firm made a decision to expand into any market outside the UK. Bovis and Costain believed that Far East construction market which include Korea, Japan, China, Thailand, Vietnam, Indonesia and Malaysia offer higher profit margin (Cooper 1993). However, the distance probably prevent the medium size firms from investing their capital in these markets. However, this problem possibly could be solved if the medium size companies expanding their operations overseas via joint-venture approaches especially with indigenous companies.

(Hypothesis 6) It was found that marketing was considered as relatively more important than R&D and advanced technology at the functional level throughout the three economic periods. In terms of resources, management was regarded as the most important resource only during the recession. However, borrowing was considered as the most important resource during the boom

whilst skilled workers was perceived as the most important one for the future.

It is interesting to observe that the respondents perceived that marketing as relatively more important than R&D and advanced technology. It indicated that the UK construction firms were quite advanced in their marketing. However, they were not strong in their R&D and advanced technology which were also important for them to be competitive at the international level. It has been mentioned in chapter 3 that a government-sponsored report has concluded that the UK construction industry is inherently incapable of supporting an internationally competitive level of long-term research and development due to various reasons (McLea 1991). Therefore, this finding confirmed the conclusion of this report. A special task force which was formed by the National Contractors Group in collaboration with the Centre for Strategic Studies in Construction at Reading University has taken some actions to enhance the role of R&D in the UK construction industry. Advanced technology can be developed with the strong and continuous R&D activity by the industry.

Hillebrandt and Cannon (1990) stated that management is the most important resource for a construction company. However, the findings show that management is the most important resource during the recession. The sound company and project management is crucial to sustain a firm's viability within the difficult economic condition. Therefore, a good management team is needed. During the economic boom, borrowing which was needed to be invested in a prosperous market became the most important resource. Skilled workers were the most important one for the future due to the prediction that they will be in shortage. As a summary, the different priority given by the respondents to different resources in the different economic period indicated that the need for the resources is partly govern by the economic environment.

For public listed companies, another important resource which was very important for their survival during the recession was cash from the rights issues. Almost all major firms had made cash calls during recent recession. As examples, some selected companies which had made cash calls are displayed by table 9.8. These capitals were needed to help companies to eliminate debts, to buy land banks, to acquire other companies which were in liquidation or purely for the survival of the firms.

Table 9.8 - Rights issues of Selected Companies

Company Name	Total (£ million)	Year
Costain	77	1991
The Berkeley Group	44.6	1991
Alfred McAlpine	38.8	1991
Wilson Bowden	34.0	1991
Wilson Bowden	57.1	1993
Tilbury	12.9	1991
Try Group	7.8	1991
Tarmac	215.0	1993
Trafalgar	310.0	1991
Trafalgar	204.0	1993
Trafalgar	400.0	1993
Eurotunnel	858.0	1994

The ability of a firm to raise cash at the right time can boost the firm's profitability. For instance, buying land banks which were cheap during the recession can increase the level of profit of a housing development project.

(Hypothesis 7) It was found that pre-tax profit was the most important financial performance measurement during the boom. However, it was cash flow that was regarded as the most

important financial performance measurement during the recession and for the future. The firms' financial performance was found to be more influenced by the market condition rather than their own strategies.

The findings indicate that pre-tax profit was the most important financial performance measurement during the boom economic period, followed by cash flow. However, cash flow became more important than pre-tax profit during the recession. This was easy to understand because a construction firm survival depended upon their cash position which was essential to cover their fixed costs and overheads the recession, . The question is how could a company increase the level of cash flow during the recession? In fact, this study shows (in chapter 7) that the level of current ratio and quick ratio had gone up to the highest level in 1991. There were a number of ways of which a firm could increase its cash flow level: selling land banks; cash calls (rights issues); selling property development business; selling other peripheral businesses; reduce fixed costs and overheads; and reduce the capacity of a firm (e.g. through redundancy). All these measures should be taken at the right time to ensure that a company would get the right price.

For a contractor, delaying payments that are supposed to be paid to the sub-contractors and suppliers was another possibility to increase the level of its cash position. This money could be placed in short-term bank deposit to generate income that improved the positive cash flow of a firm. However, this approach was heavily protested by the sub-contractors and suppliers which had suffered serious financial problems due to the effect of delayed payments. There is no action that has been taken so far by the government to resolve this problem.

Another financial performance indicator which was regarded as a very important one during the recession period was gearing. Gearing was considered only as quite important during the boom. However, the devastating effect of high gearing ratio of debt to equity during the economic slump had made the industry realised that the level of gearing should be reduce to certain limit. Heavy borrowing should reduced to the minimum which might be not exceeding 50% of the equity.

The findings also show that market condition was regarded as the most important profit determinant throughout the three different economic periods. During the boom, type of activity was considered as the next most important determinant, followed by: competition; geographical spread; site productivity; and cost control. However, cost control had changed position from the bottom to the second place in the next two periods. The lessons that the industry learned from the recession was to be more alert of the changes in the market condition and to have a better cost control mechanism.

9.4 Strategic Management Practice

Additional information was gathered during the questionnaire survey to investigate the implementation of strategic management within the construction industry. Figure 8.170 shows that measuring an achievement is the most important strategic management practice during the boom period. However, in the next two periods, anticipating changes was the most important practice which indicated that the industry was more alert with the changes in the market condition. It is interesting to see that the importance of strategic planning was increasing from one period to the next. Analysing competition was also becoming more important for the future even though at the fourth position. As a whole the respondents agreed that strategic

management was becoming more important to be implemented. However, they did not consider employing external strategic management consultant as an important practice.

As a summary, it can be seen that the awareness of the importance of the strategic management of the UK construction firms had increased within the three periods of study. The fact that the respondents regarded `anticipating changes' as the most important strategic management practice followed by `having strategic planning' for the future indicated that they understood the importance of the strategic management for the survival and profitability of their construction businesses.

9.5 Summary

The findings of the research revealed that there were some relationships between construction companies' competitive strategies and their financial performances. Construction companies should formulate appropriate competitive strategies in order to enhance their financial performance in the changing economic conditions. They should aware about the appropriate strategies which related to their: corporate development; functional level; resources; and financial performance measurements and determinants within the different economic periods. The ability of a firm to match it's resources and it's capability to the opportunities and threats which exist in their economic environments will ensure a firm's continuous success.

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CHAPTER 10

CONCLUSIONS AND FURTHER RESEARCH

10.1 Introduction

This study has been devoted to investigating the causes for a construction firm's financial success or failure. These causes can be internal factors which are within the control of the firm or they can be external factors which are beyond the control of the firm. The internal factors which are considered as firms' strategies such as types of businesses, geographical spread, cost control and resources can be formulated in order to match a firm's capability to the opportunities available in the market place. The external factors which include other parties (suppliers, sub-contractors, local authority, etc.), government regulations and economic environments should be monitored and taken into consideration during the formulation of these strategies. Both factors have been addressed in this study. This chapter presents conclusions of the study and suggestions for further research.

10.2 Conclusions

The conclusions will be described in two phases following the methodology of the study.

Phase 1: Relationships between firms' competitive strategies and their financial performance

The first phase of this study deals with the relationships between firms' competitive strategies and their financial performances. On the basis of the theoretical development four competitive strategies for a construction firm were identified:

(a) type of activity;

(b) extent of diversification;

(c) extent of internationalisation; and

(d) level of gearing.

From the annual reports of the construction firms and from the previous research, five financial performance measurements were identified:

(a) ROCE;

(b) ROSF;

(c) current ratio;

(d) quick ratio; and

(e) turnover.

The relationships between these two sets of variable were analysed by using correlation analysis and analysis of variance which were performed by the statistical package SPSS for Windows. The summary of the findings is displayed in table 10.1 and can be concluded as follows:

i. Housing and property development activities generated a high level of profit during the period of economic boom but incurred heavy losses when the economy turned-down. However, they produced a low level of positive cash flow during both periods. Therefore, a company should undertake massive projects of housing or property development when the economic condition is strong and stable. When the economic condition turns soft, a company should speedily reduce or withdraw (if possible) from these activities to avoid further losses.

ii. Contracting activity generated a low level of profitability but gave the highest level of positive cash flow for both periods. During the recession, a company should concentrate on contracting activity to maintain its profitability (even though at a low level) and to generate a high positive cash flow which was extremely necessary for the firm's survival.

Table 10.1 - A summary of relationship between competitive strategy and financial performance

COMPETITIVE STRATEGY	FINANCIAL PERFORMANCE	
	BOOM (1986-89)	RECESSION (1990-92)
Housing development activity	High level of profit but low level of cash flow	Loss
Contracting activity	Low level of profit but high level of cash flow	Low level of profit but high level of cash flow
Property development activity	High level of profit but low level of cash flow	Loss
High degree of Diversification	Large turnover	Large turnover
High degree of Internationalisation	Large turnover	Large turnover
High level of gearing	High level of profit	Loss

iii. Diversification and Internationalisation strategies were found to be the main determinants of the size of firms' turnover. The finding indicates that a high level of diversification and a high level of internationalisation were related to the greater turnover. It means that construction firms have to diversify or internationalise their activities in order to increase their turnover. In both cases, construction companies have to increase their capabilities either by acquiring new skills or improving efficiency to gain a competitive edge. Consequently, they need to invest heavily in their research and development programs in order to enhance their advanced technology if they want to succeed in both the national and international scenes.

iv. Firms with a high level of gearing generated a high level of profit during the economic boom. However, these firms suffered heavy losses and eventually some of them went into liquidation after a long and deep recession. Therefore, construction companies must not burden themselves by heavy borrowing at any time which exceeds 50% of their equity. The urge to expand rapidly during the economic boom must be curbed to prevent a firm from incurring an excessively heavy debt burden. Only a firm with a strong financial position can survive the effects of continuously depressed market conditions. For a firm listed on the stock exchange, cash can be obtained from the issues of shares.

In many cases, many major firms suffered heavy losses because of their inability to anticipate and to assess the magnitude and length of the recession. They took a decision to reduce or to withdraw from certain types of business activities far too late,

when they were already in the red. Therefore, a warning mechanism by which they can anticipate and assess the changes in the economic environment at the earlier stage is needed. The major firms also need to devise a procedure to enable them to make a quick response to any severe economic climate.

Phase 2: Appropriate construction firms' strategies within three different economic periods: economic boom (1986-89); recession (1990-93); and future (1994-onward)

In the second phase of the study, the respondents were requested to give their own past experiences, perceptions, insights and predictions to the various aspects of construction firms' strategies within the three different economic periods. From the literature search and the annual reports of the construction companies the following aspects of strategies were identified:

(a) Development strategies which included diversification and internationalisation;
(b) Functional strategies;
(c) Resources;
(d) Financial performance measurements; and
(e) Financial performance determinants.

In some ways, the findings of the second phase of this investigation can be used to cross-check the findings of the first phase. A summary of the results is displayed in table 10.2 and can be concluded as follows:

Table 10.2 - A summary of the UK construction firms' strategies during three different economic periods: stable, recession and future (slow recovery)

STRATEGIC VARIABLES	Stable period (86-89)	Recession (90-93)	Future (94-onward)
Directional	Expansion	Retrenchment	Expansion
Method	Internal expansion	Internal expansion	Internal expansion
Generic	Focus on core business	Reduce fixed cost & overhead	Focus on core business
Diversification	Housing	Housing	Housing
Internationalisation	Europe	Europe	Europe
Directional	Marketing	Marketing	Marketing
Resources	Borrowing	Management	Skill worker
Financial performance measurement	Pre-tax profit	Cash flow	Cash flow
Profit determinant	Market condition	Market condition	Market condition
Strategic management practice	Measure achievement	Anticipate changes in market condition	Anticipate changes in market condition

i. **Directional Strategy**

The respondents regarded expansion as an extremely important strategy during the boom period. However, retrenchment was stated as the most important strategy during the recession (as very important). For the future, expansion was again regarded as the most important strategy but was only perceived as very important and not extremely important. This indicated that the industry tended to be more cautious in its expansion programme after its experience in dealing with the severe recession. The lesson is that expansion must be carried out within a firm's capability in terms of resources and technical capabilities.

ii. **Method Strategy**

A clear cut trend can be seen in method strategy where internal expansion was considered as the most important strategy throughout the three periods. It means that internal expansion is a more reliable way for a firm to expand. It is also interesting to observe that joint venturing was at the second position throughout the periods of study (refer chapter 8). It means that acquisition had been less important than joint-venturing as a means of expansion. Therefore, a construction company's expansion programme probably can best be achieved through internal expansion and joint-venture approaches. Internal expansion gives more stability whilst joint-venture gives more flexibility for a firm to expand.

iii. **Generic Strategy**

Under generic strategy, focus on core business (either contracting, housing, property, or some other activities related to construction) was regarded as the most important strategy during the stable period and for the future. However,

during the recession, reducing fixed costs and overheads was considered as the most important. Therefore, it can be said that focusing on core business and reducing fixed costs and overheads will be the basis of a firm's competitive development for the future.

iv. Diversification Strategy

The findings indicated that the industry considered housing as the most important activity within the three periods. The reason for this trend is quite clear, that is the industry believed that housing would generate the highest level of profitability. However, the findings of the first phase have indicated that housing is not profitable during the recession. Therefore, the industry should consider that contracting is the most important choice for diversification during the recession. Nevertheless, contracting was stated as the second important activity during the recession and for the future.

v. Internationalisation Strategy

Europe was considered as the main market outside the UK by the respondents. The findings indicate that Internationalisation was not considered as very important by the UK construction industry. Therefore, it is not surprising to observe that the majority of the construction companies are mainly operating at the national level but not globally. Only a handful of the largest companies have significant operations overseas. Since, it was found in the first phase that internationalisation was important to increase the size of turnover, UK major firms should find ways and means to expand their businesses internationally.

vi. Functional Strategy

At the functional level, the findings indicated that effective marketing was regarded as the most important strategy in all three economic periods. R&D

was not regarded as a very important strategy by the respondents. Without a strong effort on R&D, the UK construction firms might lose their competitive edge over their rivals in the international market. Therefore, construction companies should find ways and means to intensify appropriate R&D activity.

vii. Resources

During the period of economic boom, cash from borrowing was considered as the most important resource followed very closely by land bank. This indicated that the industry was very active in speculative housing development which was buoyant at this period of time. However, during the recession, management was considered as the most important resource. The strategic change had forced the industry to react appropriately and this action needed good management skills. For the future, skilled workers were perceived as the most important resource. This prediction probably was caused by the belief that there will be a shortage of skilled workers in the future. Therefore, a construction firm has to be aware of and prepare for this shortage and has to adopt suitable policies by which to keep sufficient skilled workers for the future.

viii. Financial Performance Measurements

It was not surprising if the industry rated pre-tax profit as the most important financial performance measurement during the boom period. However, the deep and long recession had taught them that cash flow was the most vital measurement not only during the recession but also for the future. Therefore, a firm should equip itself with strategies which enable it to increase its positive cash flow such as strict project cost control, reduced fixed costs and overheads, sell illiquid assets while the economic boom lasts and make a cash call (for a public listed company).

ix. **Profit Determinants**

Throughout the period of study, market condition was observed as the most important determinant. There were no other determinants either at corporate level or at project level which were considered as equal to or more important than market condition. Therefore, a construction firm must have a sensitive devise which could enable them to sense any changes in the economic conditions. Then, it must also have a sound decision making process in order to react promptly before it becomes too late.

x. **Strategic Management Practice**

Additional information on the level of construction firms' awareness as regards their strategic management practice was also obtained from the questionnaire survey. The findings indicate that there was a steady improvement in their understanding of the importance of strategic management. For the future, the respondents believed that anticipating changes in the market condition, strategic planning and measuring their achievements as the three most important strategic management practices. However, they did not consider that the employment of external strategic management consultant as an important practice.

The above conclusions show two areas of concern for the UK construction industry, these are R&D and Internationalisation. These two areas have to be addressed seriously by the industry and also by the U.K. government. At the individual company level, all construction firms should adopt a policy of continuous and never ending improvement or total quality management. This would not necessarily incur a big expenditure. At the industry level, a joint effort among the construction companies should be made to enhance the R&D activities. At the governmental

level, a policy should be formulated to assist the construction industry to enhance the R&D activities as well as the penetration into and the development of its international markets.

10.3 Further Research

In view of the conclusions, a number of areas of research are suggested.

i. Mapping Strategic Thought

This is probably the most exciting area of research to be explored. It is a question about how people think and how they can understand their business world. It can be used to discover the basis of competition in the construction industry. Mental maps could show the structure of arguments and the subsequent conclusions. This thinking structure could be modeled and developed to create a decision support system which could be used by the industry to support the decision making process. There are possibly two main methodologies which can be employed to carry out this study: content analysis and the repertory grid (Huff 1990).

Content analysis as a research method for analysing written communication and has been employed extensively in the social sciences, foremost perhaps in political science. In recent years it has seen increasing application in the fields of marketing and, to a lesser extent management. Therefore, it has a strong potential to be employed in the field of strategic management for the construction industry. For example, if the researcher's interest is in ascertaining the CEO's perspective of construction firm strategies, then content analysis might appropriately focus on business correspondence, public speeches, interviews and perhaps annual letter to the shareholders. However, if the researcher's concern is with determining how financial institutions

perceive the construction firm's strategy, the textual sample would necessarily include documents generated by their own analysts (Erdener and Huff 1990).

The repertory grid technique was first developed by George Kelly (1955) to operationalise his personal construct theory. In developing this technique, Kelly was interested in developing instruments in which the researcher's frame of reference and worldview would not be imposed on the respondents. Close-ended surveys were rejected because they impose the researcher's cognitive structure. Open-ended interviews were rejected since most people are not conscious of the ways they cognitively organise, and could not give valid and reliable answers to direct, open-ended questions. The repertory grid technique was developed to fill this void. The three key data collection decisions when designing a study using the repertory grid are the methods for (i) selecting elements (e.g., people or objects), (ii) eliciting constructs (or dimensions) and (iii) eliciting perceptions of elements in terms of the constructs. This technique is especially promising as a method to use for eliciting strategic dimensions (Reger 1990).

ii. **Exploring Corporate Strategy**

A further study can be made to explore a construction firm's corporate strategy in greater detail. The study may be carried out at the corporate level or at the business level to be more specific. The findings of such study can be used to develop a corporate strategy model for a construction company with a specific activities. This model is necessary for a company to formulate its own appropriate firm's strategies which could make it become more resilient towards future turbulent economic environments. This type of study can be carried out by using an in-depth case study technique.

iii. Strategic Group Analysis

Strategic group analysis is a methodology which has been used by many researchers in the area of strategic management. A focal theme in the strategic group's literature is that there is a theoretical relationship between strategic groups and financial performance. Porter (1980) defines a strategic group as a group of firms in an industry following the same or similar strategy along the strategic dimension. However, Male (1991) argues that construction is a complex industry for strategic group analysis and if it is to work in construction and be of practical use as an analytical use for managers, it is best undertaken at subsidiary/divisional and bidding strategy levels. Therefore, strategic group analysis studies can be undertaken at the business level for the diversified firms or conglomerates, and at the corporate level for the single business firms.

iv. Cash In-Flow

In this study, it was found that quick ratio (cash indicator) of the sample firms was exceptionally high during the recession (refer chapter 7 - section 7.4.4). There were many assumptions that could be made concerning the sources of this cash in-flow, such as from selling of peripheral businesses, selling of land banks, selling of subsidiaries, selling of plant, etc. However, there was also an assumption that this cash in-flow was generated from the interest of sub-contractors' payments which were delayed and deposited in short-term investments. Therefore, further investigation is needed to identify the real sources of the firms' cash in-flow during the recession.

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APPENDICES

APPENDIX 1

APPENDIX 2

APPENDIX 3

APPENDIX 1

QUESTIONNAIRE FOR THE FIRST PHASE

RELATIONSHIP BETWEEN FIRMS' COMPETITIVE STRATEGIES AND THEIR FINANCIAL PERFORMANCE

FOR OFFICE USE ONLY			

QUESTIONNAIRE ON

RELATIONSHIP BETWEEN FIRM'S COMPETITIVE STRATEGIC DECISIONS AND FINANCIAL PERFORMANCE IN THE U.K. CONSTRUCTION INDUSTRY

DEPARTMENT OF CIVIL ENGINEERING
LOUGHBOROUGH UNIVERSITY OF TECHNOLOGY

September 1992

PART A - GENERAL INFORMATION

Please tick only one answer for the following questions:

1. What is the main activity of you firm for the past five years (1986-90) ?

Construction	☐
Related to Construction	☐
Unrelated to Construction	☐

2. What is the most important geographical region for your operation

Regional	☐
National	☐
Overseas	☐

3. How many employees do you have now?

Not more than 300	☐
300 to 600	☐
600 to 1200	☐
More than 1200	☐

PART B - DEGREE OF DIVERSIFICATION

1. Will you please estimate the percentage of your business derived from the following type of activities to the nearest round figure:

	1986 (%)	1987 (%)	1988 (%)	1989 (%)	1990 (%)
Building & Civil Engineering Contract					
House building					
Properties					
Investment					
Quarry Products					
Building materials					
Industrial products					
Plant hire & Sales					
Mechanical & Electrical Engineering Services					
Building merchants/ wholesalers/trading					
Shipping					
Hotel					
Services					
Other activities					
TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**

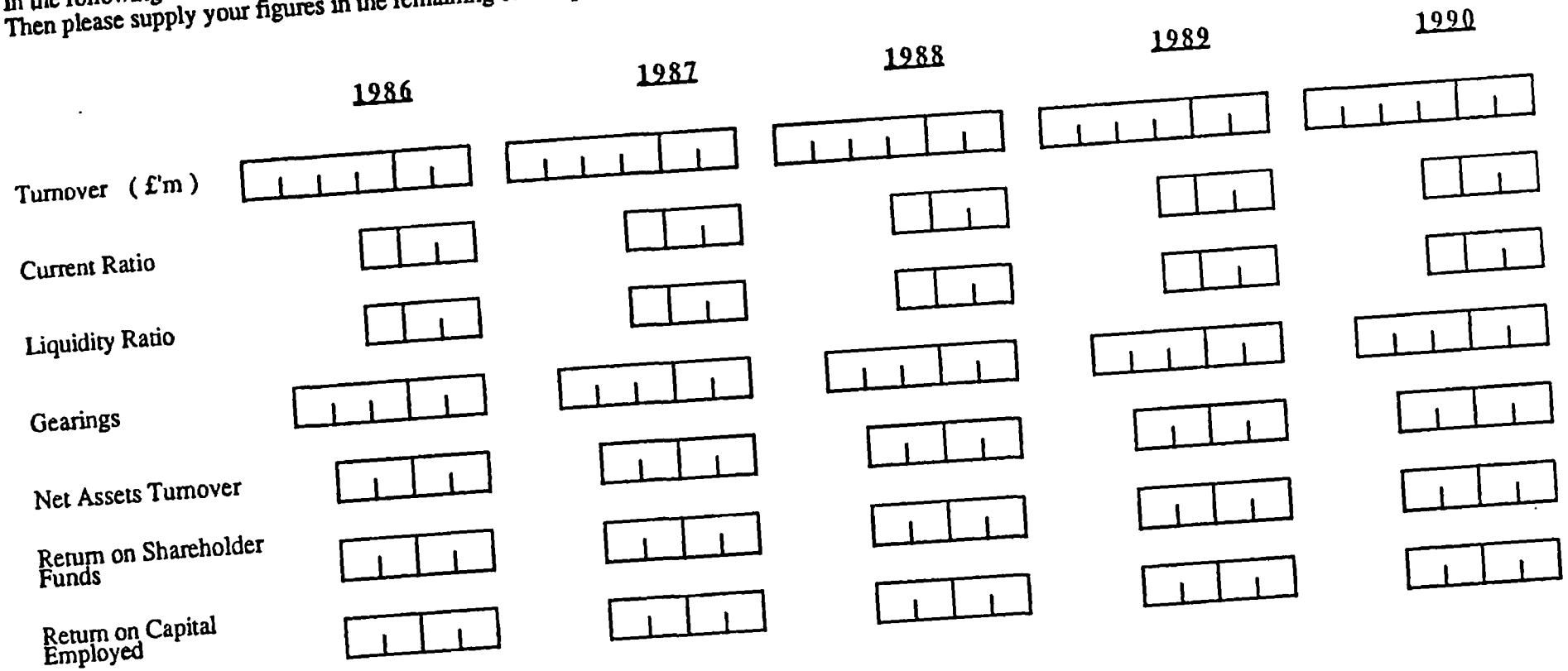
PART C - GEOGRAPHICAL SPREAD

Will you please estimate the percentage of your business according to the following geographical breakdown to the nearest round figure:

	1986	1987	1988	1989	1990
Regional					
National					
Overseas					
TOTAL	100%	100%	100%	100%	100%

PART D - FINANCIAL PERFORMANCE

In the following table some or all of the figures are already given. Will you please check that the given figures are correct.
Then please supply your figures in the remaining blank spaces.



APPENDIX 2

QUESTIONNAIRE FOR THE SECOND PHASE

APPROPRIATE FIRMS' STRATEGIES WITHIN THREE DIFFERENT ECONOMIC PERIODS

NAME OF COMPANY *(OPTIONAL)* : _____

SURVEY ON CONTRACTOR'S CORPORATE STRATEGIES

INSTRUCTIONS

This survey consists of nine questions with further breakdown. You will find that each particular question needs three answers in three columns. These three columns should be answered as follows:

1986 - 1989	**: Boom period**	) Your answers should be on the basis of past experiences or performance.
1990 - 1993	**: Recession**	) Your answers should describe the current experiences or performance.
1994 - onward	**: Future**	) *Your answers should reflect your own judgment, prediction and insight.*

By mean of a circle, please choose an appropriate number as your answer. This number with a range of 0 to 5 has the following interpretation:

1 - Not at all important
2 - Not important
3 - Quite important
4 - Very important
5 - Extremely important

No.		1986 - 1989	1990 - 1993	1994 - onward
1.	Will you please indicate the choice of the following alternatives as your firms objectives:			
	(a) Expansion	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(b) Stability / Status-Quo	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(c) Retrenchement	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(d) 'Do Nothing'	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(e) _____	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(f) _____	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

1 - Not at all important 2 - Not important 3 - Quite important 4 - Very important 5 - Extremely important

No.		1986 - 1989	1990 - 1993	1994 - onward
2.	How would you rate the need of the following resources in order to achieve your firms objectives:			
	(a) Cash from borrowing	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(b) Cash from right issues	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(c) New management expertise	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(d) Skill workers	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(e) Own plant & equipmwnt	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(f) Own quarry	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(g) Land bank	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(h) _____	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(i) _____	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

1 - Not at all important 2 - Not important 3 - Quite important 4 - Very important 5 - Extremely important

No.		1986 - 1989	1990 - 1993	1994 - onward
3.	If one of your objectives is to expand, indicate the importance of the following expansion strategies in meeting this objective:			
	(a) Activity diversification:			
	(i) Contracting	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(ii) Housing	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(iii) Property	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(iv) Others related to construction	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(v) Others unrelated to construction	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(b) Internationalisation			
	(i) Europe	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(ii) America	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(iii) Asia	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(iv) Middle East	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(v) Africa	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(vi) Other Continents	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

1 - Not at all important 2 - Not important 3 - Quite important 4 - Very important 5 - Extremely important

No.		1986 - 1989	1990 - 1993	1994 - onward
4	Indicate the importance of the following **strategic modes** in relation to the growth of firms turnover:			
	(a) Internal expansion (organic)	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(b) Acquisition	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(c) Merger	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(d) Joint venture	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(e) _____	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(f) _____	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(g) _____	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

1 - Not at all important 2 - Not important 3 - Quite important 4 - Very important 5 - Extremely important

No.		1986 - 1989	1990 - 1993	1994 - onward
5	Indicate the importance of the following factors in order to gain competitive advantage:			
	(a) Focus on core business	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(b) Use of advanced technology	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(c) Invest in research and development	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(d) Offer financial packages	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(e) Reduce fixed cost and overhead	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(f) More effecting marketing	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(g) _____	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(h) _____	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

1 - Not at all important 2 - Not important 3 - Quite important 4 - Very important 5 - Extremely important

No.		1986 - 1989	1990 - 1993	1994 - onward
6	Indicate how each of the following measurement were used to determine firms financial performance:			
	(a) Turnover	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(b) Profit before tax	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(c) Return on capital employed	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(d) Return on shareholders fund	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(e) Cash flow	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(f) Current ratio	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(g) Gearing	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(h) _____	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

1 - Not at all important 2 - Not important 3 - Quite important 4 - Very important 5 - Extremely important

No.		1986 - 1989	1990 - 1993	1994 - onward
7.	How would you rate the effect of the following factors in determining the level of firms profitability :			
	(a) Activity diversification	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(b) Geographical spread	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(c) Market condition	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(d) Competition	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(e) Site productivity	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(f) Strict cost control	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(g) _____	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(h) _____	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

1 - Not at all important 2 - Not important 3 - Quite important 4 - Very important 5 - Extremely important

No.		1986 - 1989	1990 - 1993	1994 - onward
8	Indicate how the following factors have influenced the company losses :			
	(a) Activity diversification	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(b) Geographical spread	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(c) Adverse market condition	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(d) Heavy competition	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(e) Poor site productivity	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(f) Poor cost control	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
	(g) _____	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5

1 - Not at all important 2 - Not important 3 - Quite important 4 - Very important 5 - Extremely important

No.		1986 - 1989	1990 - 1993	1994 - onward
9.	Indicate the impact of the following management practice on your company's performance:			
	(a) Anticipating changes in market conditions	1 2 3 4 5	1 2 3 4 5	0 1 2 3 4 5
	(b) Analysisng competition	1 2 3 4 5	1 2 3 4 5	0 1 2 3 4 5
	(c) Adverse market condition	1 2 3 4 5	1 2 3 4 5	0 1 2 3 4 5
	(d) Having corporate or strategic planning	1 2 3 4 5	1 2 3 4 5	0 1 2 3 4 5
	(e) Measuring company's achievements in comparison with targets	1 2 3 4 5	1 2 3 4 5	0 1 2 3 4 5
	(f) Employing external strategic management consultants	1 2 3 4 5	1 2 3 4 5	0 1 2 3 4 5
	(g) _____	1 2 3 4 5	1 2 3 4 5	0 1 2 3 4 5

1 - Not at all important 2 - Not important 3 - Quite important 4 - Very important 5 - Extremely important

APPENDIX 3

GLOSSARY

GLOSSARY

Turnover:	An alternative term for sales or work done. The turnover of goods and services net all taxes, royalties, investments, and other trading income.
Pre-tax profit :	profit from trading after deducting interest paid but before taxation, extraordinary items, minorities and other appropriations.
Extra-ordinary items :	amount which increases or decreases disposable profit which has no relevance on the trading period covered.
Minorities:	that part of disposable profit attributable to interests in subsidiary companies held outside the group.
Appropriations:	Transfers to resources or any other allocation of disposable profit for specific purposes.
Fixed assets :	these can be regarded as long term assets because they include items for use rather than for sales. Thus, they include land, buildings, plant and equipment.
Current assets :	can be regarded as short term assets which can be easily turned into or already been turned into cash. They usually consist of stock [work in progress], debtors, and cash.

Current liabilities : the liabilities the company incurred as a result of normal trading. Such items would include creditors, bank overdrafts, dividends and tax due, or any amount to be paid within next year.